Costs, Merchandising Practices, Advertising and Sales in the Retail Distribution of Clothing

BY

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IN CO-OPERATION WITH THE
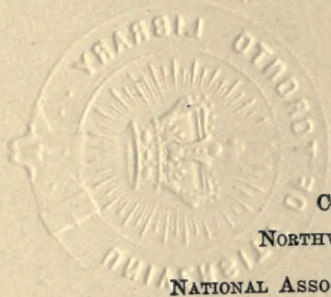NATIONAL ASSOCIATION OF RETAIL CLOTHIERS

VOLUME V

PURCHASES, INVENTORIES, PURCHASE DISCOUNTS, STOCK
TURNOVER, AND CAPITAL TURNOVER
1919, 1918, AND 1914

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PREFACE

This volume on Purchases, Inventories, Purchase Discounts, Stock Turnover, and Capital Turnover continues the studies of the Bureau on Costs, Merchandising Practices, Advertising and Sales in the Retail Distribution of Clothing. The subject matter is closely related to that of the preceding volumes in the series and should be read in connection with it.

An analysis of the details in each of the volumes has resulted in developing two types of information: First, cost and other ratios, and second, underlying principles of trade tendencies which characterize stores of different size and location. The actual ratios are determined from the records of the stores which are used. If another selection of samples were made, the actual ratios would probably be different, but to what degree it is impossible to say. While the underlying principles of trade tendencies are based upon the samples used, it is doubtful whether these would be materially affected if the number of stores were changed or their geographical distribution extended. The actual ratios are subject to change; the underlying principles seem to be general.

If there are basic tendencies underlying the different phases of retail distribution, by discovering them and adjusting retail methods in accordance with them, distribution may be made truly scientific. It is hoped that the study, of which this volume is a part, will prove of value to those who wish both to understand the conditions governing clothing distribution and to be governed by them in conducting their business.

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I. INTRODUCTION

THIS volume on Purchases, Inventories, Purchase Discounts, Stock Turnover, and Capital Turnover constitutes Volume V of the Bureau's study of Costs, Merchandising Practices, Advertising and Sales in the Retail Distribution of Clothing. Many of the ratios in this volume are the result of computations from data supplied rather than simply totals or distributions of amounts provided for directly in the questionnaire. This is particularly true of those parts which relate to annual rates of stock and capital turnover and to index numbers of ratios of operation. Care has been taken in presenting the data to define the terms used, to explain the methods by which the ratios are computed, and to call attention to the limitations of the data, and the meaning which they have for operating purposes.

Section III is devoted to an analysis of purchases in clothing stores in relation to sales. The discussion covers the years 1919, 1918, and 1914, combined and individually. Stores are classified by size and by location, and for each group ratios are computed. It has been thought not to be sufficient to give the averages alone. Accordingly, throughout the study they are supported by appropriate details.

In Section IV inventories are discussed in relation both to sales and to purchases, the ratios of inventories to sales being presented separately for all departments and for certain specified departments. The inventories are those which were reported at the close of the years 1914, 1918, and 1919, and the sales and purchases used in computing the ratios are those for the corresponding years.

Section V gives the per cents of purchase discounts for the years 1919, 1918, and 1914. The rates are shown for stores classified both by size and by location, the actual rates and the underlying principles which seem to govern them being set out both in detail and in summary.

Section VI is devoted to a discussion of annual rates of turnover in clothing stores, 1919, 1918, and 1914. The first part has to do with stock turnover in 1919; the second, with capital turnover in 1919, 1918, and 1914; and the third, with a comparison of the annual rates of stock and capital turnover for groups of identical stores, 1919.

The annual rates of stock turnover are based upon inventories at the close of 1918 and 1919. It would have been desirable to have computed the stock turnover for 1918 and 1914, but inasmuch as the inventories for 1913 and 1917 were not available, it was impossible to present the figures for these years. It is impossible to determine the errors in the stock turnover rates which resulted from using yearly rather than monthly inventories. Undoubtedly, stocks are lowest at the close of the year. But whatever the limitations of the data may

be, they probably do not materially affect the *relationship* of stores of different size and location. The actual rates may be in error by an appreciable per cent.; the relative rates, however, are thought to be sufficiently accurate and typical.

The annual rates of capital turnover are based upon the average stock as reported by merchants for the years to which they apply. It is probable that in many instances the average stock, as reported, does not represent an average of the monthly amount of stock on hand, but rather an estimated figure based upon yearly inventories. To the degree to which the data are estimates, or are not based on monthly stock records, the actual rates may be in error. Whatever the errors may be, they will not materially lessen the significance which can be attached to the capital turnover rates of one group of stores in relation to another. It is the *relationship* between the rates for stores of different size, location, and type of business which is stressed in this study.

The closing section of this volume presents, on an index or relative number basis, certain ratios of operation. The data are supplied in such form as to show the relative positions of stores of different size. The ratios refer to identical stores and the method of presentation provides for each of the accounting processes preliminary to the determination of net profits. Net profits, as such, are not given, nor are the actual amounts of cost of sales, total expense, gross trading profit, net trading profit, and net miscellaneous income. Merchants were not asked by the Bureau for a statement of profits, and in keeping with the Bureau's desire not to betray the confidence imposed in it, it seems desirable not to publish the actual amounts of profits per $100 of sales as computed.

Out of the mass of trade experience given in this volume, it is possible for merchants to determine the standards of operation which obtain in the retail clothing trade. Of course, the experience of the individual stores, because of peculiarities of location, age, trade conditions, general method of merchandising, etc., undoubtedly deviate from the standards as summarized for the trade as a whole. Notwithstanding this fact, however, the actual ratios as well as the fundamental tendencies of operation to which they unquestionably point, cannot help but be of significance to merchants, manufacturers, advertisers, and also to the public, who are all vitally interested in modern retail distribution.

IN spite of the fact that each part of this volume is provided with a summary, the more important conclusions to which the discussion has led are given here for purposes of convenience and ready reference. It is unnecessary to restate the definitions of the various terms used and to indicate the limitations which should be placed upon the particular points given. The summary should not be taken as a substitute for the general discussion but read in connection with it.

1.—YEARLY PURCHASES IN RETAIL CLOTHING STORES, 1919, 1918, AND 1914.

The discussion of the relation of purchases to sales has resulted in the following conclusions:

(1). The amounts of purchases per $100 of total net sales range from $73.34 in 1914 to $71.24 in 1919, with an average for the three years of $72.06. These ratios refer to stores which differ in number, location, and size from year to year. The corresponding amounts for a group of identical stores, however, differ only slightly from these. The average for the three years combined is $70.76. For 1914 it was $73.46 and for 1919, $69.38.

(2). The amounts of purchases per $100 of total net sales tended, on the whole, to decrease between 1914 and 1918, and between 1918 and 1919, although the differences between the years were small and the similarity suggestive of a stable relationship between purchases and sales.

(3). The amounts of purchases per $100 of total net sales decrease as stores increase in size, but to this general rule there are some exceptions for the individual years 1919, 1918, and 1914. These, however, are not sufficient to disprove the general rule. When the stores are classified in wide groups, the direction of change from store-group to store-group is consistent and seems to indicate an underlying and fundamental tendency. It is only when the stores are classified in small groups that the direction of change is erratic, and even under these circumstances the exceptions are few and of minor significance.

(4). When stores are classified by size and location, there is little evidence that the size of the city has any appreciable effect on the relation of purchases to sales. A far more important thing than the size of city in determining the

amounts of purchases to sales is the size of the store. This fact is evident in the tables in which stores are classified both by size and by location.

2.—YEARLY INVENTORIES IN CLOTHING STORES, 1919, 1918, AND 1914.

The methods by which inventories were taken are discussed in the body of the volume and it is unnecessary here to repeat what is said later. Most inventories were taken at cost with discounts not deducted, although in some instances stores reported their inventories at cost with discounts deducted, at appreciated value, or at depreciated value. The following summary makes no provision for the detail given in the text respecting the use of each of these methods.

A.—Yearly Inventories per $100 of Total Net Sales.

(1). The average amount of inventories per $100 of total net sales for the three years 1919, 1918, and 1914, combined, for stores the number, size, and location of which vary from year to year, is $38.00. In 1919 it was $33.10; in 1918, $42.92; and in 1914, $43.37. For a group of stores which was identical in number and location from year to year, the average for the combined years is $37.83. The average

amount in 1919 was $32.72; in 1918, $41.44; and in 1914, $43.70. That is, the amounts of inventories per $100 of total net sales for both groups of stores decreased between 1914 and 1918, and between 1918 and 1919, the decrease between 1918 and 1919 being approximately four times as large as between 1914 and 1918.

(2). When stores are classified by the geographical divisions of the United States, the amounts of inventories per $100 of total net sales decreased between 1914 and 1918, and between 1918 and 1919 in each of the divisions. This means that inventories throughout the entire country were low in terms of sales in 1919. For the combined years, the amounts per $100 of total net sales for the different districts vary from a maximum of $41.56 in the West North Central to a minimum of $32.91 in the South. For the individual years the range of the amounts in the different divisions is somewhat wider, but, generally speaking, they decreased between 1914 and 1918, and between 1918 and 1919.

(3). When clothing stores are classified by size, the amounts of yearly inventories per $100 of total net sales decrease as the

stores increase in size, the range being approximately from $50 to $25. The average for the combined years for stores changing in number, size, and location from year to year is $38.00, and for a group of identical stores, $37.83.

(4). When stores are classified by size and location there is little evidence to show that the size of the city has any material effect on the relation of inventories to sales. A far more important thing is the size of the store.

(5). The amounts of yearly inventories per $100 of total net sales are different from department to department. The average amount for the combined years is lowest for men's and young men's clothing, and highest in shoe departments. The average amount for the former is $27.54 and for the latter, $45.34. For boys' and children's clothing departments, the average amount is $42.41; for men's furnishings departments, $39.30; and for men's hats departments, $31.02. When stores are classified by size, the amounts decrease as the stores increase in size. Moreover, they are generally larger for stores in small cities than for stores of similar size in large cities, although the evidence that the size of the city as such influences inventories is not conclusive.

B.—*Yearly Inventories per $100 of Purchases.*

(1). The average amount of inventories per $100 of purchases for the years 1919, 1918, and 1914, combined, for a group of stores changing in number, size, and location from year to year is $52.19. For 1919 it was $46.85; for 1918, $57.57; and for 1914, $58.19. For a group of identical stores the average amount for the combined years is $52.08. In 1919 it was $46.10; in 1918, $56.53; and in 1914, $58.19.

(2). The average inventories per $100 of purchases decreased between 1914 and 1918, and between 1918 and 1919, the amount of decrease for identical stores in the single year between 1918 and 1919 being approximately three times as large as in the four-year period between 1914 and 1918.

(3). As stores increase in size the amounts of inventories per $100 of purchases decrease. This condition characterizes stores in both the combined and the individual years and holds for both the varying and the identical stores.

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(4). The average inventories per $100 of purchases are larger for stores in small than for stores in large cities, the differences becoming less, however, as stores increase in size. Moreover, the amounts are larger in the small cities than in the large cities for stores of essentially the same size. To this general rule, however, there are some exceptions, but these are few and of minor significance.

3.—PURCHASE DISCOUNTS IN CLOTHING STORES, 1919, 1918, AND 1914.

The analysis of purchase discounts resulted in the following conclusions:

(1). The average per cent. of purchase discounts for the years 1919, 1918, and 1914, combined, for a group of stores changing in number, size, and location from year to year, is 3.5. In 1919 the per cent. was 3.4; in 1918 it was 3.3; and in 1914, 4.4. For a group of identical stores for the combined years the average per cent. for the three years is 3.7. For 1919 it was 3.6; in 1918 it was 3.3; and in 1914, 4.4.

(2). The average per cent. of purchase discounts for the two groups of stores decreased between 1914 and 1918, and increased between 1918 and 1919, the actual rates for 1914 in both instances being considerably higher than for either of the other years.

(3). The average per cent. of purchase discounts increases as the stores increase in size, the range of per cents for the combined years for the stores changing in size and location from year to year being 3.0 to 4.0 when the stores are classified in wide groups. For the identical stores for the combined years the per cents range from 3.3 to 4.0. The ranges for the individual years for both groups of stores closely correspond to those for the combined years.

(4). The average per cents of purchase discounts are larger for stores in large cities than for stores in small cities. This is true not only for stores as a whole, but also for stores of approximately the same size.

4.—ANNUAL RATES OF TURNOVER IN CLOTHING STORES, 1919, 1918, AND 1914.

Turnover rates were determined for stock and for capital invested in merchandise. The methods by which stock and capital turnover were determined are shown in the text applying to these subjects.

A.—*Annual Rates of Stock Turnover, 1919.*

The analysis of annual rates of stock turnover in 1919 led to the following conclusions:

(1). When inventories are taken at cost with discounts deducted, the average rate of stock turnover is 2.2; when they are taken at cost with discounts not deducted, it is 2.3; when they are taken at depreciated value, it is 2.3; and when they are taken at appreciated value, 2.0. The average rate of turnover for all methods combined is 2.1. This average is based on the experience of 314 stores. Of these, 56 showed annual rates between 1.0 and 1.5; 91 had rates of 1.5 to 2.0; 66 had rates between 2.0 and 2.5; 14 had rates of less than 1.0; and 6 had rates of 5.0 and over.

(2). The average rates of stock turnover increase as stores increase in size, the lowest average rate being found in the smallest, and the highest in the largest stores. When the stores are classified into narrow sales-groups the rates range from 1.2 to 2.9. When they are classified into wide groups the range is from 1.4 to 2.7.

(3). Average rates of stock turnover are higher, on the whole, for stores in large cities than for stores of similar size in small cities. For the 230 stores in the small cities the average rate is 1.9, the amounts ranging from 1.5 to 2.5. For the 84 stores in the large cities the average is 2.5, the range of the amounts being 1.3 to 2.7.

(4). For the four major departments for which it was possible to determine departmental turnover, the rates are highest for men's and young men's clothing departments and lowest for boys' and children's clothing departments. The rate for the former is 2.6 and for the latter, 1.8.

(5). In the separate departments for which turnover rates could be computed, the annual rates, on the whole, increase as stores increase in size, but to this rule the rates in departments handling boys' and children's clothing are seeming exceptions.

B.—*Annual Rates of Capital Turnover in Clothing Stores, 1919, 1918, and 1914.*

(1). The annual rates of capital turnover for the years 1919, 1918, and 1914, combined, for a group of stores changing in number, size, and location from year to year is 2.9. In

1919 it was 3.4; in 1918, 2.5; and in 1914, 2.3. The corresponding rate for a group of identical stores for the combined years is 2.8. For 1919 it was 3.4; for 1918, 2.4; and for 1914, 2.3.

(2). For both groups of stores the rates increased slightly between 1914 and 1918, and markedly between 1918 and 1919.

(3). The average rates of capital turnover increase as stores increase in size. The lowest characterize small and the highest rates characterize large stores. This condition holds for the separate and the combined years for both a varying and an identical number of stores.

(4). The average capital turnover rates are slightly higher for stores in the large than for stores of similar size in the small cities.

(5). Capital turnover rates are higher for stores in the South and the East North Central than in the other divisions and in the country as a whole, but the differences are probably due not so much to geographical location as to the size of the stores included in the samples studied. The rates in the East North Central, however, can hardly be attributed to the size of the stores.

(6). Capital turnover rates, for the four major departments for which it was possible to compute the rates, are highest in men's and young men's clothing departments and lowest in boys' and children's clothing departments; the average rates being 5.2 and 2.7, respectively. Generally speaking, the rates increase as stores increase in size. This condition, however, does not hold for boys' and children's clothing departments.

C.—*Comparison of Stock and Capital Turnover Rates in Identical Stores, 1919.*

(1). For 121 identical stores in 1919, capital was turned 1.7 times for every turn of stock.

(2). Both capital and stock turns increase as stores increase in size, the rates of increase being faster for capital than for stock.

(3). The larger the proportion which sales of clothing constitute of total net sales, the more rapid the turns of both capital and stock.

(4). There seems to be no tendency for the rates of capital and stock turnover to vary either directly or inversely with the proportions which sales of furnishings constitute of total net sales.

5.—INDEX NUMBERS OF RATIOS OF OPERATION FOR CLOTHING STORES CLASSIFIED BY SIZE, 1919.

The section devoted to ratios of operation should be consulted in connection with the summary.

(1). Cost of merchandise sold per $100 of total net sales decreases as stores increase in size.

(2). Gross trading profit per $100 of total net sales increases as stores increase in size.

(3). Total expense per $100 of total net sales increases as stores increase in size.

(4). Net trading profit per $100 of total net sales decreases as stores increase in size.

(5). Net miscellaneous income per $100 of total net sales increases as stores increase in size.

(6). Net profit per $100 of sales decreases as stores increase in size.

(7). Net profit per $100 of sales per stock turnover decreases as stores increase in size.

THE schedule used by the Bureau made provision for stores to report, by types of goods for each of the three years 1919, 1918, and 1914, the amounts of their purchases at wholesale, less merchandise returned to manufacturers. Merchants were asked to indicate whether purchases were reported on a calendar or on a fiscal year basis. In most cases they reported the use of the calendar year. The amounts of purchases are gross rather than net, cash discounts not having been deducted. The part of the questionnaire relating to purchases is printed, with the remainder of the questionnaire, in Volume VI.

In the analysis of purchases, the methods which have been used in the preceding volumes are followed with minor modifications. Amounts are expressed in terms of total net sales, distinction being made for each of the years 1919, 1918, and 1914 and for stores classified by size. Moreover, for each of the years, a number of stores varying from year to year is contrasted with a group of identical stores; the latter being further classified according to the size of the city in which they are located. In this, as in the other volumes, it is thought wise to publish the amounts and ratios in detail. For comparative purposes, detailed figures are often more valuable than the generalizations which are made from them. What is wanted

as a basis for retail operations, however, are both general and specific facts and conclusions.

1.—YEARLY PURCHASES PER $100 OF TOTAL NET SALES, 1919, 1918, and 1914.

The experience available for the study of purchases for the years 1919, 1918, and 1914, combined, covers 941 store-years, $82,464,842 of total net sales, and $59,421,531 of total purchases. Based upon these amounts, purchases constitute $72.06 out of every $100 of total net sales. That is, roughly speaking, purchases are 70 per cent. of sales. In 1919, based upon an experience of 381 stores, purchases represented $71.24 per $100 of total net sales. In 1918, for an experience of 351 stores, they were $72.77, and in 1914, for an experience of 209 stores, $73.34. Between 1914 and 1918, and between 1918 and 1919, the ratios of purchases to sales decreased. In 1919, the ratio was 1.1 per cent. less than the average for the three years; in 1918 it was 1.0 per cent. more, and in 1914, 1.8 more than the average for the three years. These differences are small and suggest a stable relation between purchases and sales.

So much for the comparisons of purchases and sales in stores, the identity and number of which vary from year to year.

A truer comparison between pur-

TABLE 1

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES, 1919, 1918, AND 1914

| Years | Stores Reporting on Purchases | | | | Ratio Which Amount of Purchases per $100 of Total Net Sales for Each Year, is of the Amount for All Years Per Cent. 20 40 60 80 100 120 140 | Per Cent. |
	Number of Store-years	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	941	$82,464,842	$59,421,531	$72.06		100.0
1919	551	42,641,494	30,376,089	71.24		98.9
1918	351	28,124,435	20,465,499	72.77		101.0
1914	209	11,698,913	8,579,943	73.34		101.8

Average $72.06

chases and sales from year to year can be made from the experience of a group of identical stores. Details are available for this purpose for 204 stores for each of the years 1919, 1918, and 1914. From year to year the number and location are constant; only the sales and purchases change. The combined experience of this group of stores for the three years involves $55,804,895 of total net sales and $39,487,659 of total purchases. The average amount of annual sales per store for the combined years, accordingly, is $91,184. In 1919 it was $127,996; in 1918, $89,956; and in 1914, $55,602. Contrasted with the average annual sales per store, the average annual amount of purchases for the combined years is $64,522. In 1919 it was $88,799; in 1918, $63,922; and in 1914, $40,847. That is, from 1914 to 1919 sales per store increased $72,394 or 130.2 per cent. and purchases, $47,952 or 117.4 per cent. The average amount of purchases per $100

of total net sales for the combined years is $70.76. In 1919 it was $69.38; in 1918, $71.06; and in 1914, $73.46. Between 1918 and 1919 the amount decreased 2.4 per cent. From 1914 to 1919 the per cent. of decrease was 5.6. Simultaneous with the decrease of ratios went an increase of both sales and purchases per store. In spite of the fact that both groups of stores show lower purchases in terms of sales in 1919 than in either 1918 or 1914, it is safer to rely upon the records of identical than of a varying number of stores.

What is true in a year to year comparison for the identical stores, treated as a whole, is also true in general for the same stores when classified by size. So-called identical stores, however, do not remain the same in size from year to year. Both purchases and sales are constantly changing, the amounts of sales serving to shift the stores from sales-group to sales-group, depending on the amount

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of the increase or decrease. For instance, as shown in Tables 7 to 10, inclusive, in 1914, 109 of the 204 stores had annual sales of less than $40,000; by 1918 this number had decreased to 65; and by 1919, to 35. As the number of stores in the smallest sales-group decreased between 1914 and 1919, the number in the largest group increased. This fact may be illustrated by comparing for the different years stores with annual sales of $180,000 and over. In 1914, six of the 204 had sales of this amount; in 1918, eighteen fulfilled the condition; and by 1919 the number had grown to 32.

While the identity of the stores, from the point of view of sales, is not maintained throughout the years, the operating units are the same. Accordingly, such stores can be compared from year to year with less error than could a group of stores which was changing not only as to sales, but also as to number and location.
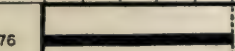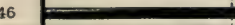
The average amount of purchases per $100 of total net sales for the identical stores decreased between 1914 and 1919. This condition also holds for the stores which had annual sales under $40,000 and between $80,000 and $180,000. For those which had annual sales of $40,000 to $80,000, the average amounts increased between 1914 and 1918, and decreased between 1918 and 1919. For those which had annual sales of $180,000 and over, the average amounts decreased between 1914 and 1918, and increased between 1918 and 1919. On the whole, therefore, while there are exceptions, for some of the store-groups, to the rule that the ratios of purchases to sales decreased from 1914 to 1918 and from 1918 to 1919, all of the groups show a decrease between 1914 and 1919.

The amounts of goods purchased in a given year depend upon sales and

TABLE 2

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100 OF TOTAL NET SALES FOR 204 IDENTICAL STORES, 1919, 1918, AND 1914

Years	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for 204 Identical Stores for Each Year, is of the Amount for All Years Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
	Number of Store-years	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	612	$55,804,895	$39,487,659	$70.76		100.0
1919	204	26,111,155	18,114,941	69.38		98.0
1918	204	18,351,017	13,040,022	71.06		100.4
1914	204	11,342,723	8,332,696	73.46		103.8

Average $70.76

inventories in the preceding year. The amounts purchased in 1913 and 1917 are unknown. This makes it impossible, except for 1919, to analyze purchases and sales in all their various aspects. The relations of inventories and discounts to purchases are described later.

From the preceding discussion of the relation of purchases to sales from year to year, it may be concluded as follows: First, the amounts of purchases per $100 of total net sales, when based upon the records of a varying number of stores, range from $73.34 in 1914 to $71.24 in 1919, with an average for the three years of $72.06. Corresponding amounts for identical stores range from $73.46 in 1914 to $69.38 in 1919, with an average for the three years of $70.76.* Second, the ratios of purchases to total net sales for identical stores, when classified each year by the amount of annual sales, decreased between 1914 and 1918, and between 1918 and 1919, for two groups, while for two other groups the changes were erratic. Third, when a varying number of stores is compared from year to year, the ratios of purchases to sales decreased between 1914 and 1918, and between 1918 and 1919, but by slightly smaller differences than those for a group of identical stores.

* The differences between the averages for the two groups of stores are probably due to the fact that a larger proportion of the large than of the small stores reported their purchases for each of the three years. On the whole, the larger the store, the smaller the yearly purchases in terms of sales. See the discussion infra. pp. 405 to 413.

A.—*Yearly Purchases per $100 of Total Net Sales for Stores Classified by Size, 1919, 1918, and 1914.*

In Tables 1 and 2 and in the discussion of them, nothing is said concerning the relation of purchases to sales for stores of different size. This phase of the problem will now be discussed for each of the years for a varying number, and for a group of identical stores. For 1919, 1918, and 1914, combined, the experience of 941 store-years, as given in Table 3, shows that the average amount of purchases per $100 of total net sales is $72.06. When the stores are classified by size, the maximum amount of purchases per $100 of total net sales is $82.51, while the minimum is $66.21. That is, the maximum is 114.5 per cent. of the average, while the minimum is 91.9 per cent. Between these extremes, the ratios concentrate roughly around 70 to 72 per cent. When the stores are classified into narrow groups as in the upper part of Table 3, the amounts, on the whole, decrease as the stores increase in size. This tendency, however, is not so evident as it is when they are grouped into wider classes. In this form the direction of change is unmistakable.

In Table 3 the experience of the stores for the three years is combined. If there are differences, as there are, for the stores in the various years, these are merged and their identity is lost in a general figure. The data are given in this form so as to make

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TABLE 3

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE,
1919, 1918, AND 1914, COMBINED

Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent.	Per Cent.
	Number of Store-years	Total Net Sales	Total Purchas	Amount per $100 of Total Net Sales		
Total (Average)	941	$82,464,842	$59,421,531	$72.06		100.0
Under $20	80	922,888	761,439	82.51		114.5
$20 to $40	235	7,095,135	5,303,342	74.75		103.7
$40 to $60	215	10,577,886	7,852,151	74.23		103.0
$60 to $80	131	9,082,534	6,747,384	74.29		103.1
$80 to $100	81	7,328,643	5,243,991	71.55		99.3
$100 to $140	94	11,088,073	7,879,052	71.06		98.6
$140 to $180	45	7,152,693	5,042,156	70.49		97.8
$180 to $220	22	4,363,075	2,888,705	66.21		91.9
$220 to $300	23	6,012,340	4,317,973	71.82		99.7
$300 to $500	23	8,409,520	6,114,659	72.71		100.9
$500 & over	12	10,432,055	7,270,679	69.70		96.7
Under $40	295	8,018,023	6,064,781	75.64		105.0
$40 to $80	346	19,660,420	14,599,535	74.26		103.1
$80 to $180	220	25,569,409	18,165,199	71.04		98.6
$180 & over	80	29,216,990	20,592,016	70.48		97.8

Average $72.06

it easy to contrast the combined and the individual years for each group of stores.

The average amount of purchases per $100 of total net sales for 381 stores in 1919 was $71.24—an amount slightly less than the average for the combined years. The maximum amount—$77.38—applies to the group having the lowest annual sales, while the minimum amount—$62.74—applies to the stores with annual sales of $180,000 to $220,000 per year. When the stores are classified into narrow groups, the amounts show a moderate tendency to decrease as the stores increase in size. When they are classified in wider groups, however, as in the lower part of Table 4, the amounts clearly decrease as the stores increase in size. To this general rule, however, there are some exceptions but these are not sufficient to disprove the rule.

The fact that the amounts of purchases per $100 of total net sales were somewhat different in 1919 from those for the combined years makes all
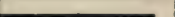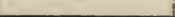
the more necessary an analysis of the individual years. Table 5 contains the data on the relation of purchases to sales for the year 1918. In this year, the average amount of purchases per $100 of total net sales for 351 stores was $72.77. This is $1.53 or 2.1 per cent. more than for 1919. Moreover, the difference between the maximum and the minimum amounts in 1918 is larger than in 1919. In this year, the stores which reported the largest amount of purchases per $100 of total net sales are those having annual sales under $20,000. The minimum amount, on the other hand, characterizes the three stores having sales in excess of $500,000. Between these extremes, the ratios decrease as the stores increase in size. This is strikingly true when the stores are classified into wide groups as in the lower part of Table 5. The tendency in this year is the same as that shown for 1919, but somewhat more pronounced.

Two hundred and nine stores reported their purchases and sales in 1914. The average amount of purchases per $100 of total net sales in this year was $73.34. The maximum

TABLE 4
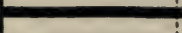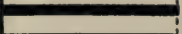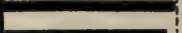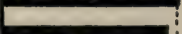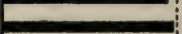
TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent.	Per Cent.
	Number	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	381	$42,641,494	$30,376,089	$71.24		100.0
Under $20	5	78,229	60,550	77.38		108.6
$20 to $40	59	1,828,550	1,316,655	72.01		101.1
$40 to $60	91	4,468,521	3,212,068	71.85		100.9
$60 to $80	59	4,094,630	3,026,353	73.91		103.7
$80 to $100	40	3,639,182	2,563,293	70.44		98.9
$100 to $140	52	6,275,375	4,412,304	70.31		98.7
$140 to $180	26	4,117,764	2,935,545	71.29		100.1
$180 to $220	12	2,395,912	1,503,273	62.74		88.1
$220 to $300	15	3,910,928	2,864,231	73.24		102.8
$300 to $500	14	4,967,662	3,652,092	73.52		103.2
$500 & over	8	6,864,741	4,829,765	70.36		98.8
Under $40	54	1,906,779	1,377,185	72.23		101.4
$40 to $80	150	8,563,151	6,238,401	72.85		102.3
$80 to $180	118	14,032,321	9,911,142	70.63		99.1
$180 & over	49	18,139,243	12,849,361	70.84		99.4

Average $71.24

TABLE 5

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1918

Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent.	Per Cent.
	Number	Total Net Sales	Total Purchases	Amount of Purchases per $100 of Total Net Sales	0 20 40 60 80 100 120 140	
Total (Average)	351	$28,124,435	$20,465,499	$72.77		100.0
Under $20	22	361,484	319,362	88.35		121.4
$20 to $40	100	3,018,978	2,259,649	74.85		102.9
$40 to $60	80	3,917,187	3,000,516	76.60		105.3
$60 to $80	51	3,558,555	2,666,058	74.92		103.0
$80 to $100	29	2,588,601	1,896,261	73.25		100.7
$100 to $140	30	3,483,133	2,526,653	72.54		99.7
$140 to $180	14	2,219,484	1,512,689	68.15		93.7
$180 to $220	7	1,386,406	1,026,411	74.03		101.7
$220 to $300	8	2,101,412	1,453,742	69.18		95.1
$300 to $500	7	2,679,984	1,919,402	71.62		98.4
$500 & over	3	2,809,211	1,884,756	67.09		92.2
Under $40	122	3,380,462	2,579,011	76.29		104.8
$40 to $80	131	7,475,742	5,666,574	75.80		104.2
$80 to $180	73	8,291,218	5,935,603	71.59		98.4
$180 & over	25	8,977,013	6,284,311	70.00		96.2

Average $72.77

amount—$78.97—applies to stores with sales under $20,000, while the minimum amount — $61.82 — corresponds to the three stores with annual sales of $180,000 to $220,000. The number of stores in this year, except for those having small sales, is inadequate for calculating a satisfactory average when small sales-groups are used. When the stores are classified in the wider groups, however, there are sufficient samples except for the group with sales of $180,000 and over. Classified in this way, the minimum amount applies to the largest, and the maximum amount to the smallest stores. The amounts decrease as the stores increase in size and range from $77.22 to $69.42.

For the purpose of comparing the amounts of purchases per $100 of total net sales for stores of different size, it is safer to use the more limited group of identical stores shown in Tables 7 to 10, inclusive. For this purpose, size alone is considered; the additional factor—size of city—being reserved for later discussion. By classifying 204 stores according to the amounts of their annual sales, it is

TABLE 6

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1914

Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores — Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
	Number	Total Net Sales	Total Purchases	Amount of Purchases per $100 of Total Net Sales		
Total (Average)	209	$11,698,913	$8,579,943	$73.34		100.0
Under $20	33	483,175	381,547	78.97		107.7
$20 to $40	76	2,247,607	1,727,038	76.84		104.8
$40 to $60	44	2,192,178	1,639,567	74.79		102.0
$60 to $80	21	1,429,349	1,054,993	73.81		100.6
$80 to $100	12	1,100,860	784,437	71.26		97.2
$100 to $140	12	1,329,565	940,095	70.71		96.4
$140 to $180	5	815,445	593,922	72.83		99.3
$180 to $220	3	580,757	359,021	61.82		84.3
$220 to $300	-	-	-	-		-
$300 to $500	2	761,874	543,165	71.29		97.2
$500 & over	1	758,103	556,158	73.36		100.0
Under $40	109	2,730,782	2,108,585	77.22		105.3
$40 to $80	65	3,621,527	2,694,560	74.40		101.4
$80 to $180	29	3,245,870	2,318,454	71.43		97.4
$180 & over	6	2,100,734	1,458,344	69.42		94.7

Average $73.34

found, for the years 1919, 1918, and 1914, combined, that the amounts of purchases per $100 of total net sales decrease as the stores increase in size. The differences between the average amounts for the stores of different size are not large, but they are strikingly uniform and consistent as to direction. Moreover, since the stores are grouped only in the wider classes, sufficient samples are available to produce satisfactory averages.
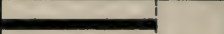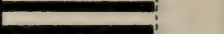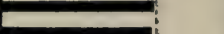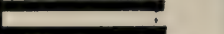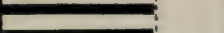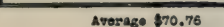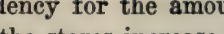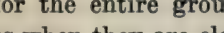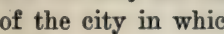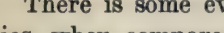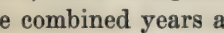
For the 612 store-years, the average amount of purchases per $100 of total net sales is $70.76. The amount for the stores which exceed it by the widest margin is $74.45, and for those which fall below it by the greatest difference, $69.15. The difference of the extremes is $5.30, or 7.5 per cent. of the average.

Moreover, the amounts of purchases per $100 of total net sales for the stores located in cities with population under 40,000 also decrease as the stores increase in size. The maximum amount, $74.47, applies to the stores having the smallest sales, while

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TABLE 7

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR 204 IDENTICAL STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for 204 Identical Stores of Different Size, in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
		Number of Store-years	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	Total (Average)	612	$55,804,895	$39,497,659	$70.76		100.0
Total (Average)	Under $40	209	5,584,026	4,157,090	74.45		105.2
	$40 to $80	210	12,061,495	8,906,789	73.84		104.4
	$80 to $180	137	15,822,507	10,977,001	69.38		98.0
	$180 & over	56	22,336,867	15,446,779	69.15		97.7
Under 40	Total (Average)	459	27,382,726	19,654,320	71.78		101.4
	Under $40	196	5,049,910	3,760,707	74.47		105.2
	$40 to $80	169	9,538,045	7,027,506	73.68		104.1
	$80 to $180	88	10,021,961	6,954,933	69.40		98.1
	$180 & over	12	2,772,810	1,911,174	68.93		97.4
40 and over	Total (Average)	153	28,422,169	19,833,339	69.78		98.6
	Under $40	19	534,116	396,383	74.21		104.9
	$40 to $80	41	2,523,450	1,879,283	74.47		105.2
	$80 to $180	49	5,800,546	4,022,068	69.34		98.0
	$180 & over	44	19,564,057	13,535,605	69.19		97.8

Average $70.76

the minimum, $68.93, applies to those doing the largest annual business. An essentially similar condition characterizes the stores in cities with population of 40,000 and over.

In 1919, for the 204 stores, the average amount of purchases per $100 of total net sales was $69.38. The greatest amount for any group of stores, when classified by size, does not exceed the average by more than 2.2 per cent., nor does the minimum amount for any group fall below it by more than 0.9 per cent. That is, the amounts are practically identical. No unmis-

takable tendency for the amounts to decrease as the stores increase in size is evident for the entire group, nor for the stores when they are classified by the size of the city in which they are located. There is some evidence in these ratios, when compared with those for the combined years and for 1918 and 1914, to suggest that the conditions for 1919 are exceptional.

In 1918, for the 204 stores, the average amount of purchases per $100 of total net sales was $71.06; those with annual sales under $80,000 having greater, and those with annual sales

TABLE 8

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR 204 STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for 204 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores — Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
		Number	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	Total (Average)	204	$26,111,156	$18,114,941	$69.38		100.0
	Under $40	35	1,036,613	719,199	69.37		100.0
	$40 to $80	69	4,011,484	2,844,223	70.90		102.2
	$80 to $180	68	7,930,225	5,455,442	68.77		99.1
	$180 & over	32	13,132,633	9,096,077	69.28		99.9
Under 40	Total (Average)	153	12,493,278	8,637,340	69.14		99.7
	Under $40	32	951,345	658,522	69.21		99.8
	$40 to $80	62	3,548,968	2,525,500	71.16		102.6
	$80 to $180	50	5,854,359	4,000,062	68.34		98.5
	$180 & over	9	2,138,410	1,452,256	67.91		97.9
40 and over	Total (Average)	51	13,617,883	9,477,701	69.60		100.3
	Under $40	3	85,268	60,677	71.16		102.6
	$40 to $80	7	462,506	318,723	68.91		99.3
	$80 to $180	13	2,075,866	1,452,450	69.97		100.8
	$180 & over	23	10,994,223	7,645,821	69.54		100.2

Average $69.38

of $180,000 and over having smaller amounts than the average for the entire group. The maximum amount was $75.85 and the minimum, $68.84. Roughly, the amounts decrease as the stores increase in size, but this condition is not so evident when the stores are classified by the size of the cities in which they are located. The conditions for this year, as shown by two groups of stores, essentially agree.

In 1914, for the 204 stores, the average amount of purchases per $100 of total net sales was $73.46—$4.08 or 5.9 per cent. greater than in 1919, and $2.40 or 3.4 per cent. greater than in 1918. When the entire group is classified according to the amounts of annual sales, the ratios decrease as the stores increase in size. In this year, the maximum, $77.22, applies to the group having the smallest annual sales, and the minimum, $69.42, to the group having the largest annual sales. The first exceeds the average by 5.1 per cent.; the second falls below it by 5.5 per cent. This represents an extreme difference of 10.6. When the

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TABLE 9

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR 204 STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1918

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for 204 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
		Number	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	Total (Average)	204	$18,351,017	$13,040,022	$71.06		100.0
Total (Average)	Under $40	65	1,816,431	1,329,306	73.18		103.0
	$40 to $80	79	4,591,696	3,483,015	75.85		106.7
	$80 to $180	42	4,839,390	3,337,343	68.96		97.0
	$180 & over	18	7,103,500	4,890,358	68.64		96.9
Under 40	Total (Average)	153	8,934,941	6,531,033	73.10		102.9
Under 40	Under $40	62	1,747,178	1,281,238	73.33		103.2
	$40 to $80	62	3,540,232	2,697,220	76.19		107.2
	$80 to $180	26	3,013,131	2,093,657	69.48		97.8
	$180 & over	3	634,400	458,918	72.34		101.8
40 and over	Total (Average)	51	9,416,076	6,508,989	69.13		97.3
40 and over	Under $40	3	69,253	48,068	69.41		97.7
	$40 to $80	17	1,051,464	785,795	74.73		105.2
	$80 to $180	16	1,826,259	1,243,686	68.10		95.8
	$180 & over	15	6,469,100	4,431,440	68.50		96.4

Average $71.06

204 stores for this year are classified by the size of the city in which they are located, there is no unmistakable evidence throughout all the groups that the amounts decrease as the stores increase in size, although this tendency is present when the stores with the smallest are compared with those having the largest sales. In the intermediate steps, however, the direction of change is uncertain.

On the basis of the analysis of a varying and of an identical number of stores, for the years 1919, 1918, and 1914, classified by the amount of annual sales, it may be concluded as follows: First, for the combined years, there is a general tendency for the amounts of purchases per $100 of total net sales to decrease as the stores increase in size. The averages for the identical stores probably more accurately characterize the true relation of purchases to sales than do those for the stores varying in number from year to year. Second, in 1919, for a group of 381 stores, the amounts of purchases per $100 of total net sales decrease as the stores increase in size. These ratios, being

TABLE 10

TOTAL NET SALES, TOTAL PURCHASES, AND AMOUNT OF PURCHASES PER $100
OF TOTAL NET SALES FOR 204 STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchases				Ratio Which Amount of Purchases per $100 of Total Net Sales for 204 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
		Number	Total Net Sales	Total Purchases	Amount per $100 of Total Net Sales		
Total (Average)	Total (Average)	204	$11,342,723	$8,332,696	$73.40		100.0
	Under $40	109	2,730,782	2,108,585	77.22		105.1
	$40 to $80	62	3,458,315	2,579,551	74.59		101.5
	$80 to $180	27	3,052,892	2,186,216	71.61		97.5
	$180 & over	6	2,100,734	1,458,344	69.42		94.5
Under 40	Total (Average)	153	5,954,513	4,486,047	75.34		102.6
	Under $40	96	2,351,187	1,820,947	77.45		105.4
	$40 to $80	45	2,448,855	1,804,786	73.70		100.3
	$80 to $180	12	1,154,471	860,314	74.52		101.4
	$180 & over	-	-	-	-		-
40 and over	Total (Average)	51	5,388,210	3,846,649	71.39		97.2
	Under $40	13	379,595	287,638	75.77		103.1
	$40 to $80	17	1,009,460	774,765	76.75		104.5
	$80 to $180	15	1,898,421	1,325,902	69.84		95.1
	$180 & over	6	2,100,734	1,458,344	69.43		94.6

Average $73.46

based upon 381 stores, seem to be valid for comparative purposes. On the other hand, the ratios for 204 stores for this year show neither a tendency to increase nor decrease as the stores increase in size. Between those with sales of less than $40,000, and $40,000 to $80,000 there is a slight increase, but this is followed by a decrease for the stores in the next larger sales-group, and this in turn by an increase for the stores having sales of $180,000 and over. Third, in 1918, for a group of 351 stores, the amounts of annual purchases per $100 of total

net sales decrease as the stores increase in size. A similar tendency, on the whole, is shown for the 204 stores which reported throughout the different years. Both groups of stores agree as to the relation of purchases to sales for stores of different size. Fourth, in 1914 for a group of 209 stores the amounts of purchases per $100 of total net sales decrease as the stores increase in size. This tendency is borne out by the 204 stores which reported their sales throughout the three years.

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B.—Yearly Purchases per $100 of Total Net Sales for Stores Classified by Size and by Size of City in Which Located,* 1919, 1918, and 1914.

The records of 204 stores are available for a comparison of the amounts of purchases per $100 of total net sales for stores classified by size and by location. These stores reported their purchases and sales for each of the years under consideration. The results of the analysis are shown in Tables 7 to 10, inclusive.

The average amount of purchases per $100 of total net sales for 1919, 1918, and 1914, combined, for the stores in the small cities is $71.78. For those in the large cities it is $69.78, or $2.00 smaller. These averages are secured by comparing different numbers of stores in the two city-groups, as well as stores, the size of which varies for each of the different sales-classes. Because of these facts, the differences in the averages may be due quite as much to the different proportions of stores of different size as to the different relationships which obtain between purchases and sales. In order to overcome the limitations of such averages, it is only necessary to compare stores of essentially the same size, located in cities of different size. If this is done for the stores for the combined years, those in the two groups of cities with sales of $80,000 and over are essentially uniform—the average amounts being $69, more or less, for the different groups. A like similarity obtains in the two city-groups for the stores having annual sales under $40,000. The stores in the two city-groups which have amounts noticeably different are those with sales from $40,000 to $80,000. In the small cities, 169 stores reported $73.68 of purchases per $100 of total net sales. The corresponding amount for the 41 stores in the larger cities is $74.47. In spite of these differences, the similarity of the amounts suggests at once that the location according to city size is of distinctly less significance, in determining the relation of purchases to sales, than is the size of the store.†

In 1919, even less difference in the amounts of purchases per $100 of total net sales is encountered for stores in the small cities as compared to those in the large cities. The average for the 153 stores in cities with population under 40,000 is $69.14; the average for the 51 stores in the larger cities is $69.60. When stores of essentially the same size in cities of different size are compared, the averages for the stores in the small cities are less than those for the stores in the large cities for every group except the one which contains stores having annual sales of $40,000 to $80,000. But these differences are small. Roughly speaking, the averages for the entire group of stores, in the two types of cities, agree closely with the

* Population figures are for 1920.

† See Table 7, p. 410.

averages for the stores of different size.*

In 1918 and 1914 the amounts of purchases per $100 of total net sales, for stores of the same size located in cities of different size, are not sufficiently different to suggest that the size of the city, as such, determines the relation of purchases to sales. It is unnecessary to comment upon these differences in detail, inasmuch as the amounts closely follow those described for the year 1919. A far more important consideration than the size of the city, in determining the amount of purchases per $100 of total net sales, is the size of the store. But this factor has been discussed, and it is unnecessary here to summarize the results of the analysis.

C.—Summary.

(1). The amounts of purchases per $100 of total net sales range from $73.34 in 1914 to $71.24

* See Table 8, p. 411.

in 1919, with an average for the three years of $72.06. The amounts from year to year for a group of identical stores differ slightly from these, the average for the three years combined being $70.76.

(2). The amounts of purchases per $100 of total net sales tended, on the whole, to decrease between 1914 and 1918, and between 1918 and 1919.

(3). The amounts of purchases per $100 of total net sales decrease as stores increase in size, but to this general rule, there are some exceptions for the individual years 1919, 1918, and 1914. These, however, are not sufficient to disprove the general rule.

(4). The size of the city in which stores are located does not seem to have any appreciable effect on the relation of purchases to sales in stores of similar size.

IN the questionnaire used by the
Bureau, clothiers were asked to re-
port the amounts of their inven-
tories at the close of the fiscal or
calendar year, as the case might
be, for the different types of goods
which they carried. They were also
asked to indicate the basis upon
which they inventoried their stock,
distinction to be made according to
the following methods: at cost,
discounts deducted; at cost, discounts
not deducted; at depreciated value;
and at appreciated value. An
overwhelming proportion of the stores
reported that their stock was inven-
toried at cost with discounts not de-
ducted.

The inventories shown in the tables
for the years 1919, 1918, and 1914 are
those taken at the close of the years.
In a few instances the inventories
were taken on a non-calendar year
basis, but, for purposes of analysis,
this fact is ignored. Moreover, no
distinction is made between invento-
ries taken according to the different
methods. It is evident, of course, that
a comparison of inventories and sales
will be affected by the methods by
which inventories are taken, but inas-
much as only 14.3 per cent. of the
stores used other bases than costs with
discounts deducted or not deducted,
the effect in this case can be ignored.
It would have been desirable to have
presented the data according to each
of the methods, but this was imprac-

ticable. An analysis of such a nature
would have been too detailed and the
results inconclusive.

1.—YEARLY INVENTORIES PER $100 OF
TOTAL NET SALES, 1919, 1918, and
1914.

The discussion of inventories in re-
lation to sales applies first to all de-
partments, and second, to those de-
partments for which sufficient data
were available to warrant special at-
tention.

A.—All Departments.

For the purpose of comparing in-
ventories and total net sales, two
groups of stores are considered; first,
stores varying in number from year
to year, and second, stores which are
identical throughout the three years.

In the first group, the experience
of 920 store-years is available. The
total net sales in these store-years are
$80,901,412 and the total inventories,
$30,743,883. The amount of total in-
ventories per $100 of total net sales,
accordingly, is $38.00. In 1919, 357
stores had, on the average, an inven-
tory of $33.10 per $100 of total net
sales. In 1918, for 336 stores, the cor-
responding amount was $42.92, and
in 1914, for 227 stores, it was $43.37.
The stores included in these compar-
isons are not identical as to size, loca-
tion, or types of goods carried, all the

stores which supplied the necessary data being used. The results of the comparison for the three years are given in Table 11.

According to this table the amounts of inventories per $100 of total net sales decreased between 1914 and 1918, and between 1918 and 1919. In the four-year period between 1914 and 1918, however, the amount of decrease was $0.45, while in the single year between 1918 and 1919, it was $9.82. The year 1919, therefore, is clearly exceptional. Relatively, is the condition due to sales or to inventories or to both? The following discussion will serve to answer this question.

The average amount of sales per store in 1914 was $55,545; the corresponding inventory for this year was $24,089. By 1918, sales per store had grown to $81,007, or by 45.8 per cent., while the inventory per store had increased to $34,765, or by 44.3 per cent. The ratios between the average inventories and the average sales in these two years are approximately equal.

In 1919, however, the average amount of sales per store was $115,054, while the average inventory was $38,080. Between 1918 and 1919, the former increased by $34,047 or 42.0 per cent., while the latter increased by $3,315 or 9.5 per cent. That is, the per cent. of increase in average sales per store exceeded the per cent. of increase in average inventory per store by 32.5 per cent., with the result that the average inventory per $100 of total net sales fell, between 1918 and 1919, from $42.92 to $33.10.

Of course, the differences in these amounts may be due, in part, to the change in the identity of the stores from year to year. Whether or not the condition in 1919 is abnormal may be determined from an analysis of the relation of inventories to sales for a group of identical stores. For this purpose, the records of 223 stores are available. Table 12 shows the relations between inventories and sales for these stores.

For the three years combined, the

TABLE 11

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES, 1919, 1918, AND 1914

Years	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for Each Year, is of the Amount for All Years Per Cent.	Per Cent.
	Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales	0 30 60 90 120 150 180	
Total (Average)	920	$80,901,412	$30,743,883	$38.00		100.0
1919	357	41,074,281	13,594,627	33.10		87.1
1918	336	27,218,498	11,681,032	42.92		112.9
1914	227	12,608,633	5,468,224	43.37		114.1

Average $38.00

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average amount of inventory per $100 of total net sales is $37.83. That is, the amount is $0.17 less for an identical than it is for a varying number of stores for the years in question. In 1914, the amount for 223 stores was $43.70 as compared to $43.37 for the 227 stores shown in Table 11. The amounts are practically the same. In 1918, the same 223 stores produced an average of $41.44 as compared with $42.92 for the 336 stores shown in Table 11. In 1919, the 223 stores gave an average of $32.72 as contrasted to $33.10 for the 357 stores contained in Table 11. From year to year, therefore, the direction of change in the identical stores agrees throughout with that shown for a varying number. Between 1914 and 1918, for the identical stores, the average amount decreased by $2.26, while between 1918 and 1919, the amount of change was $8.72, or 3.9 times as great as that from 1914 to 1918. The large decrease between 1918 and 1919 for the identical group closely corresponds

to that shown for the varying number of stores.

That the inventories were smaller in 1919, in relation to sales, may be indicated by comparing the amounts of sales and inventories, respectively, per store for the years 1914, 1918, and 1919. In 1914, the average amount of total net sales per store for the 223 stores was $55,631, while the corresponding inventory per store was $24,310. By 1918, the sales per store had increased to $88,820, or by 59.7 per cent., while the inventory per store had grown to $36,803, or by 51.4 per cent. For 1914 and 1918, the relationship between the average inventory per store and the total net sales per store showed little difference. On the other hand, in 1919, the average amount of sales per store was $126,660, which was an increase of 42.6 per cent. over 1918. The average inventory per store in this year was $41,441, or an increase over 1918 of 12.6 per cent. Relatively, therefore, sales increased 3.4 times as

TABLE 12

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR 223 IDENTICAL STORES, 1919, 1918, AND 1914

Years	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for 223 Identical Stores for Each Year, is of the Amount for All Years Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
	Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	669	$60,457,761	$22,869,567	$37.83		100.0
1919	223	28,245,176	9,241,281	32.72		86.5
1918	223	19,806,913	8,207,047	41.44		109.5
1914	223	12,405,672	5,421,239	43.70		115.5

Average $37.83

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rapidly as inventories; the net effect for this year being low inventories in terms of sales. Tables 11 and 12 show, for the stores considered, that the average inventories per $100 of total net sales in 1914 and 1918 were approximately the same—roughly amounting to $42 to $43. In 1919, on the other hand, the average amounts shown in the respective tables were $33.10 and $32.72, or approximately $10.00 less than in 1914 and 1918.

What is true in a year to year comparison for the varying number of stores when treated as a whole, is also true in general for the same stores when classified by size. The average amount of inventory per $100 of total net sales for 118 stores, with annual sales of less than $40,000, was $55.52 in 1914. In 1918, for 113 stores with the same annual sales, the amount was $58.55. By 1919, the amount for the 58 stores having annual sales of this amount had decreased to $47.67. Similar changes from year to year obtain for the stores with sales in excess of $40,000. These may be seen by reference to Tables 13, 14, 15, and 16. For a year to year comparison for stores of different size, it is safer to use the stores which reported for each of the various years. These so-called identical stores, however, do not remain the same in respect to size. Inventories and sales per store, of course, change, with the result that the identity of the stores in the various sales-groups is not maintained from year to year. In spite of this fact, however, such stores may be compared from year to year with less error than stores which change not only as to sales, but also as to number and location.
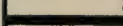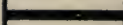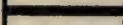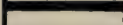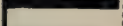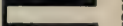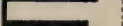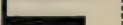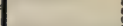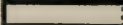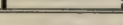
When the identical stores are compared irrespective of size, the average amounts of inventory per $100 of total net sales decrease as is shown in Table 12. When the stores are classified by size, the changes between 1914 and 1918, and between 1918 and 1919, for those with sales of less than $40,000 are as follows: In 1914, the average amount was $55.71; in 1918, it was $60.18; and in 1919, $51.62. For the stores with sales of $40,000 to $80,000, it was $45.40 in 1914; $49.43 in 1918; and $41.02 in 1919. For those with sales of $80,000 to $180,000, the corresponding amount in 1914 was $39.36; in 1918, $44.50; and in 1919, $36.01. For those with sales of $180,000 and over, the amount in 1914 was $30.97; in 1918, $28.02; and in 1919, $26.27. From group to group, the average amounts do not change in every instance in the same direction as the totals. Generally speaking, however, the amounts in 1918 are larger than in 1914, in spite of the fact that the average is smaller, while in 1919, not only the average, but also the amount for each group of stores is smaller. The decrease from 1918 to 1919, shown in Table 12 for the stores combined, holds for the stores when classified by size.

From a comparison of yearly inventories and net sales, it may be concluded as follows: First, the amounts of inventories per $100 of total net

TABLE 13

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
	Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	920	$80,901,412	$30,743,883	$38.00		100.0
Under $20	50	772,363	545,797	70.67		186.0
$20 to $40	239	7,220,838	3,848,194	53.29		140.2
$40 to $60	209	10,323,676	4,823,856	46.73		123.0
$60 to $80	126	8,396,752	3,738,679	44.53		117.2
$80 to $100	80	7,225,840	2,991,393	41.40		108.9
$100 to $140	95	11,149,973	4,396,441	39.43		103.8
$140 to $180	43	6,849,624	2,511,402	36.67		96.5
$180 to $220	21	4,173,010	1,210,202	29.00		76.3
$220 to $300	23	6,050,595	1,784,315	29.49		77.6
$300 to $500	22	8,306,786	2,207,474	26.57		69.9
$500 & over	12	10,432,055	2,686,130	25.75		67.8
Under $40	289	7,993,201	4,393,991	54.97		144.7
$40 to $80	335	18,720,428	8,562,535	45.74		120.4
$80 to $180	278	25,225,337	9,899,236	39.24		103.3
$180 & over	78	28,962,446	7,888,121	27.24		71.7

Average $38.00
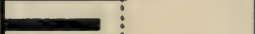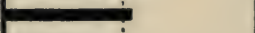
sales for a varying, as well as for an identical number of stores, decreased between 1914 and 1918, and between 1918 and 1919. Second, not only did the amounts decrease between 1914 and 1919 for the stores as a whole, but likewise for stores when classified by size. The conspicuous feature of the decrease is the uniformity which obtains between stores, the number, location, and size of which differ, and those which are the same in number and location, although different in size from year to year.

(1)—YEARLY INVENTORIES FOR STORES CLASSIFIED BY SIZE, 1919, 1918, AND 1914.

In Tables 11 and 12, and in the discussion relating to them, nothing is said concerning the effect which size of stores may have upon the relation between inventories and total net sales. Both a varying and an identical number of stores, classified by size from year to year, may now be considered with this in mind. In Table 13, which combines the experience of

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TABLE 14

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores — Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
	Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	557	$41,074,281	$13,594,627	$33.10		100.0
Under $20	3	52,061	34,400	66.05		199.5
$20 to $40	55	1,734,055	816,975	47.11		142.3
$40 to $60	66	4,241,862	1,845,220	43.50		131.4
$60 to $80	52	3,596,734	1,432,659	39.83		120.3
$80 to $100	38	3,445,569	1,279,111	37.12		112.1
$100 to $140	51	6,142,970	2,178,436	35.46		107.1
$140 to $180	25	3,976,313	1,366,453	34.36		103.8
$180 to $220	11	2,205,847	586,629	26.59		80.3
$220 to $300	15	3,949,183	1,132,308	28.67		86.6
$300 to $500	13	4,864,929	1,215,162	24.98		75.5
$500 & over	9	6,864,741	1,707,274	24.87		75.1
Under $40	58	1,786,134	851,375	47.67		144.0
$40 to $80	138	7,838,596	3,277,879	41.82		126.3
$80 to $180	114	13,564,852	4,824,000	35.56		107.4
$180 & over	47	17,884,699	4,641,373	25.95		78.4

Average $33.10
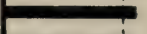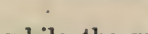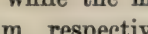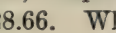
all the stores reporting both their inventories and total net sales during one or more of the years 1919, 1918, and 1914, the average amount of inventories per $100 of total net sales is $38.00. The maximum amount— $70.67—applies to stores with annual sales under $20,000. From this maximum the amounts decrease consistently, with one exception, to $25.75, when the stores are classified into small groups, the latter amount applying to stores with annual sales of $500,000 and over. The consistency

of this decrease is marked. The lower part of Table 13 summarizes the changes for stores of different size when wider classes are used. The effect of this wider grouping is to decrease the range of differences and to smooth out the exceptions to the rule that the amounts decrease as the stores increase in size.

In 1919, the average inventory per $100 of total net sales was $33.10. The maximum amount was $66.05 and the minimum, $24.87. As the stores increase in size, the amounts decrease

TABLE 15

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1918

| Classified Total Net Sales (in 000's) | Stores Reporting on Inventory | | | | Ratio Which Amount of Inventory per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210 | Per Cent. |
	Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	336	$27,218,498	$11,681,032	$42.92		100.0
Under $20	17	277,341	217,439	78.40		182.7
$20 to $40	95	2,909,492	1,646,403	55.55		132.0
$40 to $60	74	3,652,924	1,862,101	50.98		118.8
$60 to $80	52	3,310,669	1,672,414	50.52		117.7
$80 to $100	28	2,514,461	1,189,550	47.31		110.2
$100 to $140	32	3,663,436	1,662,160	45.37		105.7
$140 to $180	12	1,913,162	832,712	43.53		101.4
$180 to $220	7	1,386,406	457,137	32.97		76.8
$220 to $300	8	2,101,412	652,007	31.03		72.3
$300 to $500	7	2,679,984	757,171	28.25		65.8
$500 & over	3	2,809,211	729,938	25.98		60.5
Under $40	113	3,186,833	1,865,842	58.55		136.4
$40 to $80	126	6,963,593	3,534,515	50.76		118.3
$80 to $180	72	8,091,059	3,684,422	45.54		106.1
$180 & over	25	8,977,013	2,596,253	28.92		67.4

Average $42.92

with almost the same regularity as when the three years are combined. The data for 1918 consistently follow the same general principle shown for 1919, although the average amount for all the stores combined is conspicuously larger. In this year the maximum amount was $78.40 and the minimum, $25.98. When the stores are classified as in the lower part of Table 13, the maximum is $58.55 and the minimum $28.92.

Conditions similar to those shown for 1919 and 1918 obtain for 1914. The average amount in this year was $43.37, while the maximum and the minimum, respectively, were $66.37 and $28.66. When the stores are classified into narrow groups, the minimum amount does not characterize the stores with maximum sales, but this could hardly be expected in view of the few stores available for comparison which have sales in excess of $80,000. When the stores are classified into wider groups, as in the lower part of the table, the amounts decrease as the stores increase in size and with almost the same regularity that is encountered in the other years.

TABLE 16

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE, 1914

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for Stores of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
	Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	227	$12,608,633	$5,468,224	$43.37		100.0
Under $20	30	442,941	293,958	66.37		153.0
$20 to $40	88	2,577,293	1,382,816	53.65		123.7
$40 to $60	49	2,428,890	1,116,535	45.97		106.0
$60 to $80	22	1,489,349	633,606	42.54		98.1
$80 to $100	14	1,265,810	522,732	41.30		95.2
$100 to $140	12	1,343,567	555,845	41.37		95.4
$140 to $180	6	960,049	312,237	32.52		75.0
$180 to $220	3	580,757	166,436	28.66		66.1
$220 to $300	-	-	-	-		-
$300 to $500	2	761,874	235,141	30.86		71.2
$500 & over	1	758,103	248,918	32.83		75.7
Under $40	118	3,020,234	1,676,774	55.52		128.0
$40 to $80	71	3,918,239	1,750,141	44.67		103.0
$80 to $180	32	3,569,426	1,390,814	38.96		89.8
$180 & over	6	2,100,734	650,495	30.97		71.4

Average $43.37

A more significant comparison between the amounts of inventories per $100 of total net sales for stores of different size may be made for the identical stores. In the combined years, the maximum amount is $56.63 and the minimum, $27.25. The amounts decrease as the stores increase in size. This is true not only for the combined years, but also for each of the years. The nature of the decrease is shown in amounts and in graphic form in Tables 17 to 20, inclusive.

(2)—YEARLY INVENTORIES PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY IN WHICH LOCATED,* 1919, 1918, AND 1914.

In the preceding discussion the conclusion was reached that the size of clothing stores is significant in determining the relation of inventories to total net sales. Has the size of the city in which the stores are located a similar influence? Tables 17 to 20,

* Population figures are for 1920.

inclusive, in which the stores are classified by size and by size of the city in which they are located, are designed to answer this question.
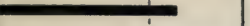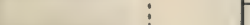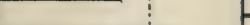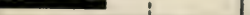
For the combined years, the average inventory per $100 of total net sales for the stores in the small cities is $44.69. For the 162 stores located in the cities with population of 40,000 and over, the corresponding amount is $30.71. The difference between these two items is $13.98. Since the relation of inventories to total net sales, however, is influenced by the size of stores, these averages are de-

termined in part by the proportion in which stores of different size enter into the total. If stores of essentially the same size in cities of different size are compared, the disturbing factor of the size of stores may be reduced to a minimum. The data, in the tables alluded to above, are arranged in such a manner that this can be done.

For the combined years, the average inventory per $100 of total net sales for the stores located in the small cities and with annual sales under $40,000 is $57.86. For the stores of

TABLE 17

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR 223 IDENTICAL STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for 223 Identical Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 20 40 60 80 100 120 140 160	Per Cent.
		Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	Total (Average)	669	$60,457,761	$22,869,567	$37.83		100.0
	Under $40	214	5,849,185	3,312,489	56.63		149.7
	$40 to $80	239	13,638,460	6,185,801	45.36		119.9
	$80 to $180	159	18,356,282	7,207,881	39.27		103.8
	$180 & over	57	22,613,834	6,163,396	27.25		72.0
Under 40	Total (Average)	507	30,782,755	13,756,288	44.69		118.1
	Under $40	194	5,262,398	3,044,844	57.86		152.9
	$40 to $80	197	11,041,785	5,231,457	47.38		125.2
	$80 to $180	104	11,733,061	4,632,953	39.49		104.4
	$180 & over	12	2,745,511	847,034	30.85		81.6
40 and over	Total (Average)	162	29,675,006	9,113,279	30.71		81.2
	Under $40	20	586,787	267,645	45.61		120.6
	$40 to $60	42	2,596,675	954,344	36.75		97.1
	$80 to $180	55	6,623,221	2,574,928	38.88		102.8
	$180 & over	45	19,868,323	5,316,362	26.76		70.7

Average $37.83

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corresponding size located in the large cities, the average amount is $45.61. Similarly, for stores located in the small cities and with annual sales of $40,000 to $80,000, the average amount is $47.38 as contrasted with $36.75, for stores of similar size located in the larger cities. The differences between the amounts for the stores in the two groups of cities, however, do not find a counterpart in the stores with sales of $80,000 and over. In fact, there is a negligible difference between the average amounts for stores having annual sales between $80,000 and $180,000 and located in the different sized

cities. Moreover, the margin of difference for stores having annual sales of $180,000 and over, located in the two groups of cities, is considerably smaller than that shown for the small stores similarly located.

Of course, a comparison of this type does not prove conclusively that location is significant in this respect. The sales-groups are wide, and stores of unequal size, although found in sales-groups of the same size, are compared in the two types of cities. Moreover, the city-groups are too wide to secure homogeneity. Such comparisons as those provided for in Tables 17 to 20, inclusive, do suggest, however, that

TABLE 18

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR 223 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for 223 Stores of Different Size, is of the Amount for All Stores	Per Cent.
		Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales	Per Cent. 0 20 40 60 80 100 120 140 160	
Total (Average)	Total (Average)	223	$28,245,176	$9,241,381	$32.72		100.0
Total (Average)	Under $40	29	875,688	452,040	51.62		157.8
	$40 to $80	83	4,786,369	1,963,572	41.02		125.4
	$80 to $180	78	9,173,579	3,303,252	36.01		110.1
	$180 & over	33	13,409,600	3,522,417	26.27		80.3
Under 40	Total (Average)	169	14,058,872	5,294,011	37.66		115.1
	Under $40	27	816,565	427,711	52.38		160.1
	$40 to $80	74	4,207,694	1,743,878	41.44		126.7
	$80 to $180	59	6,923,502	2,492,748	36.00		110.0
	$180 & over	9	2,111,111	629,674	29.83		91.2
40 and over	Total (Average)	54	14,186,304	3,947,270	27.82		85.0
	Under $40	2	59,063	24,329	41.19		125.9
	$40 to $80	9	578,675	219,694	37.97		116.0
	$80 to $180	19	2,250,077	810,504	36.02		110.1
	$180 & over	24	11,298,489	2,892,743	25.60		78.2

Average $32.72

city location is a factor to be considered in comparing inventories and sales.*

The average amounts of inventory per $100 of total net sales for the combined years for stores of different size and location are shown in Table 17.

Stores in 1919 had low inventories in relation to total net sales. Had the size of the city in which the stores are located an influence in determining this relation in 1919, as it seems to have had in the combined years?

* Inventories for stores in cities of different size are considered again in relation to purchases and to stock turnover, pp, 448 and 467.

The average inventory per $100 of total net sales in 1919 for 169 stores located in small cities was $37.66. The corresponding amount for stores in large cities was $27.82. The difference between these amounts was $9.84, or 70.4 per cent. of the difference between the average amounts for the stores in the two groups of cities for the combined years. The margin of difference in this year for stores with annual sales under $40,000, located in the two city-groups, closely corresponds to the difference for the combined years. For the stores with annual sales of $40,000 to $80,000, it is

TABLE 19

TOTAL NET SALES, INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL
NET SALES FOR 223 STORES CLASSIFIED BY SIZE AND
BY SIZE OF CITY, 1918

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for 223 Stores of Different Size, is of the Amount for All Stores	Per Cent.
		Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales	Per Cent. 0 20 40 60 80 100 120 140 160	
Total (Average)	Total (Average)	223	$19,806,913	$8,207,047	$41.44		100.0
Total (Average)	Under $40	69	2,008,188	1,208,495	60.18		145.2
	$40 to $80	87	5,045,948	2,494,253	49.43		119.3
	$80 to $180	49	5,649,877	2,513,815	44.50		107.4
	$180 & over	18	7,103,500	1,990,484	28.02		67.6
Under 40	Total (Average)	169	10,031,096	5,011,303	49.96		120.6
	Under $40	65	1,909,724	1,145,957	60.01		144.8
Under 40	$40 to $80	70	3,982,338	2,069,711	51.97		125.4
	$80 to $180	31	3,504,634	1,578,275	45.03		108.7
	$180 & over	3	634,400	217,360	34.26		82.7
40 and over	Total (Average)	54	9,775,817	3,195,744	32.69		78.9
	Under $40	4	98,464	62,538	63.51		153.3
40 and over	$40 to $80	17	1,063,610	424,542	39.92		96.3
	$80 to $180	18	2,144,643	935,540	43.62		105.3
	$180 & over	15	6,469,100	1,773,124	27.41		66.1

Average $41.44
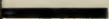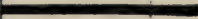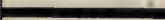
somewhat smaller, the amounts for the stores in small and in large cities in 1919 being $41.44 and $37.97, respectively. The amounts are almost identical for stores with annual sales of $80,000 and $180,000. Indeed, the inventory is slightly smaller, relatively, for stores in the small, than for stores in the large cities. The reverse condition, however, obtains for stores with sales of $180,000 and over; the margin of difference being approximately the same in this year as in the combined years.

For 1918, the average inventory per $100 of total net sales was larger for stores in the small than for stores in the large cities, the margin of difference being considerably larger than in 1919. The averages, however, for the stores in the two city-groups are influenced by the proportion in which stores of different size enter into the totals. Roughly speaking, however, if the stores with annual sales of under $40,000 are omitted from comparison because of the small number of reports from the large cities, the margins of difference between stores of similar size in the two groups of cities are in keeping with those shown for 1919. The detailed

TABLE 20

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR 223 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for 223 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores — Per Cent.	Per Cent.
		Number	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
	Total (Average)	223	$12,405,672	$5,421,839	$43.70		100.0
Total (Average)	Under $40	116	2,965,369	1,651,954	55.71		127.5
	$40 to $80	69	3,806,143	1,727,976	45.40		103.9
	$80 to $180	32	3,533,426	1,390,814	39.36		90.1
	$180 & over	6	2,100,734	650,495	30.97		70.9
	Total (Average)	169	6,692,787	3,450,974	51.56		118.0
Under 40	Under $40	102	2,536,109	1,471,176	58.01		132.7
	$40 to $80	53	2,851,753	1,417,868	49.72		115.6
	$80 to $180	14	1,304,925	561,930	43.06		98.5
	$180 & over	-	-	-	-		-
	Total (Average)	54	5,712,885	1,970,265	34.49		78.9
40 and over	Under $40	14	429,260	180,778	42.11		96.4
	$40 to $80	16	954,390	310,108	32.49		74.3
	$80 to $180	18	2,228,501	829,384	37.13		85.1
	$180 & over	6	2,100,734	650,495	30.97		70.9

Average $43.70

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ratios, as well as the number of stores upon which they are based, are shown for 1918 in Table 19.

In 1914, the average inventory per $100 of total net sales for the 169 stores located in the small cities was $51.56, while the corresponding amount for the 54 stores located in the large cities was $34.49. In this year, there were no stores with sales of $180,000 and over which reported for cities under 40,000. If stores of the same size in the two groups of cities, however, are compared, the amounts of inventories per $100 of total net sales are larger for the stores in the small than in the large cities. It is unnecessary to point out the differences in detail. The amounts are contained in Table 20.

The analysis of the inventories per $100 of total net sales for stores classified by size and located in cities of different size leads to the following conclusions: First, the amounts, on the average, are higher for stores located in small than for those in large cities. Second, for stores of essentially the same size, the amounts are also larger for stores located in small than in large cities. The margin of difference, however, is greater for the stores with annual sales of less than $80,000 than for stores with annual sales in excess of this amount. Third, the differences for stores in the two city-groups are less in 1919 than in either of the other two years. In this respect, 1919 appears to be an exceptional year.
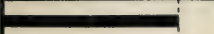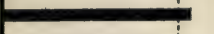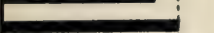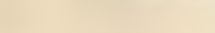
(3)—YEARLY INVENTORIES PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914.

For the purpose of showing the amounts of inventories per $100 of

TABLE 21

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914, COMBINED

| Geographical Divisions | Stores Reporting on Inventory | | | | Ratio Which Amount of Inventory per $100 of Total Net Sales for Each Division, is of the Amount for All Divisions — Per Cent. 0 20 40 60 80 100 120 | Per Cent. |
	Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales		
Total (Average)	920	$80,901,412	$30,743,863	$38.00		100.0
The East	156	13,055,433	5,303,909	40.63		106.9
The South	127	16,381,766	5,391,749	32.91		86.6
East North Central	272	20,945,589	7,990,585	38.15		100.4
West North Central	273	19,151,049	7,959,094	41.56		109.4
The West	92	11,367,575	4,098,546	36.05		94.9

Average $38.00

428
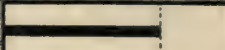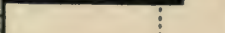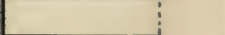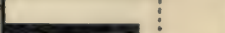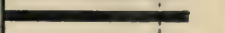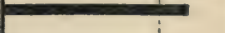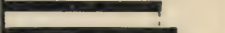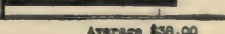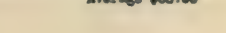
total net sales for stores classified by geographical divisions of the United States, two tables are presented. Table 21, for the combined years, contains the amounts in terms of net sales for the geographical divisions set in juxtaposition; while Table 22 shows the amounts by years for each of the divisions.

In the discussion of the relation of

TABLE 22

TOTAL NET SALES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914

Classified Total Net Sales (in 000's)	Years	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Net Sales for All Divisions and for Each Division, is for Each Year Based on the Average for All Years	Per Cent.
		Number of Store-years	Total Net Sales	Total Inventory	Amount per $100 of Total Net Sales	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	Total (Average)	920	$80,901,412	$30,743,883	$38.00		100.0
	1919	357	41,074,281	13,594,627	33.10		87.1
	1918	336	27,218,498	11,681,032	42.92		112.9
	1914	227	12,608,633	5,468,224	43.37		114.1
The East	Total (Average)	155	13,055,433	5,303,909	40.63		106.9
	1919	57	6,117,864	2,186,539	35.74		94.1
	1918	55	4,478,599	2,044,308	45.65		120.1
	1914	43	2,458,970	1,073,062	43.64		114.8
The South	Total (Average)	127	16,381,766	5,391,749	32.91		86.6
	1919	52	8,343,974	2,588,813	31.03		81.7
	1918	47	5,872,052	1,941,926	33.07		87.0
	1914	28	2,165,740	861,010	39.76		104.6
East North Central	Total (Average)	272	20,945,589	7,990,585	38.15		100.4
	1919	108	10,901,731	3,587,551	32.91		86.5
	1918	99	7,034,865	3,051,107	43.37		114.1
	1914	55	3,008,993	1,351,927	44.93		118.2
West North Central	Total (Average)	273	19,151,049	7,959,094	41.56		109.4
	1919	107	10,113,061	3,411,623	33.73		88.9
	1918	101	6,071,673	3,212,025	52.90		139.2
	1914	65	2,966,315	1,335,446	45.02		118.5
The West	Total (Average)	92	11,367,575	4,098,546	36.05		94.9
	1919	33	5,597,651	1,820,101	32.52		85.6
	1918	33	3,761,309	1,431,666	38.06		100.2
	1914	26	2,008,615	846,779	42.16		110.9

Average $38.00

429

inventories to total net sales for stores of different size, the conclusion was reached that the amounts vary inversely with the size of the stores. Accordingly, in any comparisons of stores classified by geographical regions, if the stores used differ widely in size, the amounts for the divisions will vary in keeping with this fact. Moreover, it was concluded above that the average inventory per $100 of total net sales was less in 1919 than in either of the other two years. Does this difference, for the country as a whole, show itself when the United States is classified into regions?

The average inventories per $100 of total net sales, for the combined years, are smaller for stores in the South and the West than in the country as a whole, while the average amounts for stores in the East and in the West North Central exceed the average amount for the entire country. The amount for the East North Central closely approximates that for all the regions. Averages for the geographical divisions are given in amounts and in graphic form in Table 21.

The average amount of annual sales per store for the stores in the South is $128,990, while the corresponding amount for the stores in the West is $123,561. For the other regions, the average amounts range from $70,150 in the West North Central to $83,689 for the Eastern division. That is, the average sales per store in the West and the South are approximately $50,000 to $60,000 greater than in the other regions. The average size of the stores undoubtedly explains the low amounts of inventories per $100 of total net sales for the South and West. Between these regions, however, notwithstanding the fact that the stores reporting are of approximately equal size, there is a difference of $3.14 in the amounts of inventories

TABLE 23

SALES, INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF SALES FOR
SPECIFIED DEPARTMENTS, 1919, 1918, AND 1914, COMBINED

Departments	Stores Reporting Department Sales and Inventory				
	Number of Store-years	Sales	Inventory	Inventory per $100 of Sales	
				Actual	Graphic Per Cent. 0 10 20 30 40 50
Men's and Young Men's Clothing	248	$18,269,376	$5,031,919	$27.54	
Men's Hats and Caps	154	1,858,230	576,462	31.02	
Men's Furnishings	166	6,755,604	2,654,798	39.30	
Boys' and Children's Clothing	134	1,781,508	755,476	42.41	
Shoes	123	2,298,207	1,041,897	45.34	

430

per $100 of total net sales. The excess for the West is probably due in part to the distance of the stores from wholesale markets.

In Table 22, the amounts of inventories per $100 of total net sales are given for each of the years 1919, 1918, and 1914 for each of the territorial regions. It has already been determined that inventories in terms of sales were lower in 1919 than in either of the other years, when the country as a whole is considered as a unit. Table 22 shows that this is true for each of the different geographical

areas. The graphic part of the table emphasizes the margins of difference between the years for each district. For reasons given above, it is doubtful whether the details in this table are wholly comparable from region to region.

B.—Specified Departments.

The preceding discussion of the relation of inventories and total net sales refers to stores taken as units, no distinction being made for separate departments. Data are avail-

TABLE 24

SALES AND INVENTORY OF MEN'S AND YOUNG MEN'S CLOTHING, AND AMOUNT OF INVENTORY PER $100 OF SALES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914, COMBINED

| Size of City (in 000's) | Classified Total Net Sales (in 000's) | Stores Reporting Inventory of Men's and Young Men's Clothing | | | | Ratio Which Amount of Inventory per $100 of Sales for Stores of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210 | Per Cent. |
		Number of Store-years	Sales of Clothing	Inventory of Clothing	Amount per $100 of Sales		
Total (Average)	Total (Average)	248	$18,269,376	$5,031,919	$27.54		100.0
Total (Average)	Under $40	34	404,298	200,177	49.51		179.8
	$40 to $80	72	1,895,602	764,664	40.34		146.5
	$80 to $180	89	5,084,678	1,705,051	33.53		121.8
	$180 & over	53	10,884,798	2,362,027	21.70		78.8
Under 40	Total (Average)	133	4,418,564	1,610,535	36.45		132.4
	Under $40	30	339,444	182,113	53.65		194.8
	$40 to $80	49	1,171,096	506,610	43.26		157.1
	$80 to $180	47	2,239,989	745,784	33.29		120.9
	$180 & over	7	668,035	176,028	26.35		95.7
40 and over	Total (Average)	115	13,850,812	3,421,384	24.70		89.7
	Under $40	4	64,854	18,064	27.85		101.1
	$40 to $80	23	724,506	258,054	35.62		129.3
	$80 to $180	42	2,844,689	959,267	33.72		122.4
	$180 & over	46	10,216,763	2,185,999	21.40		77.7

Average $27.54

able, however, from which an analysis can be made of the relationship of inventories to sales for the following departments: Men's and Young Men's Clothing, Men's Hats and Caps, Men's Furnishings, Boys' and Children's Clothing, and Shoes. Table 23 summarizes the conditions for each of these departments. The amounts per $100 of total net sales vary from $27.54 for men's and young men's clothing, to $45.34 for shoes. The data refer to the combined years, an analysis of the individual years being reserved for later discussion.

(1)—YEARLY INVENTORIES OF MEN'S AND YOUNG MEN'S CLOTHING PER $100 OF SALES OF MEN'S AND YOUNG MEN'S CLOTHING FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY IN WHICH LOCATED,[*] 1919, 1918, AND 1914.

In Table 17, it is shown that the average inventory per $100 of total net sales for the 669 store-years is $37.83. The corresponding figure for men's and young men's clothing departments, as shown in Table 24, is $27.54. For these departments the

* Population figures are for 1920.

TABLE 25

RELATION OF INVENTORIES AND SALES OF MEN'S AND YOUNG MEN'S CLOTHING FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	1919			1918			1914		
		Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic 0 20 40 60	Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic 0 20 40 60	Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic 0 20 40 60
Total (Average)	Total (Average)	106	$22.75		89	$32.95		53	$33.69	
	Under $40	9	38.39		11	60.54		14	48.89	
	$40 to $80	26	34.63		28	43.25		18	43.44	
	$80 to $180	42	28.64		32	40.19		15	34.20	
	$180 & over	29	19.18		18	25.64		6	25.84	
Under 40	Total (Average)	59	28.01		47	43.85		27	52.56	
	Under $40	8	38.39		11	60.54		10	60.17	
	$40 to $80	20	36.06		17	46.84		12	50.78	
	$80 to $180	24	26.31		18	39.60		5	50.52	
	$180 & over	8	22.88		1	47.64		-	-	
40 and over	Total (Average)	47	21.06		42	29.45		26	27.93	
	Under $40	-	-		-	-		4	27.85	
	$40 to $80	6	30.19		11	39.45		6	32.82	
	$80 to $180	18	30.98		14	40.73		10	29.57	
	$180 & over	23	18.83		17	24.98		6	25.84	

Average $22.75   Average $32.95   Average $33.69
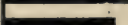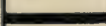
amounts decrease as the stores increase in size, the direction of change being the same as for stores treated as a whole. Moreover, in these departments, the average inventories, in terms of sales, for stores in cities with population under 40,000 are larger than for stores in cities with population of 40,000 and over, the margin of difference being approximately equal to that shown for the stores treated as a unit.

When the average inventories of men's and young men's clothing per $100 of sales of corresponding goods are compared, as in Table 25, the amounts decreased from 1914 to 1918, and from 1918 to 1919. In 1919, with a single exception, the stores doing the smallest amount of business had the largest inventories when measured in terms of sales. In general, for 1918, this is true, although there are minor exceptions for stores classified by size and located in cities with population of 40,000 and over. It is unnecessary to point out all of the differences shown in actual and graphic form in Table 25. From the manner in which the data are presented, it is easy to see the relations which obtain in the different years.

TABLE 26

SALES AND INVENTORY OF MEN'S HATS AND CAPS, AND AMOUNT OF INVENTORY PER $100 OF SALES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting Inventory of Men's Hats and Caps				Ratio Which Amount of Inventory per $100 of Sales for Stores of Different Size in Cities of Different Size, is of the Amount for All Stores. Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
		Number of Store-years	Sales of Men's Hats and Caps	Inventory of Men's Hats and Caps	Amount per $100 of Sales		
Total (Average)	Total (Average)	154	$1,858,230	$576,462	$31.02		100.0
	Under $40	80	51,375	27,209	52.96		170.7
Total (Average)	$40 to $80	45	234,319	89,917	38.37		123.7
	$80 to $180	52	512,151	166,345	32.48		104.7
	$180 & over	37	1,060,385	292,991	27.63		89.1
	Total (Average)	65	382,543	130,403	34.09		109.9
	Under $40	17	36,849	24,225	65.74		211.9
Under 40	$40 to $80	24	109,466	45,143	41.24		132.9
	$80 to $180	22	195,433	54,829	28.06		90.5
	$180 & over	2	40,795	6,206	15.21		49.0
	Total (Average)	89	1,475,687	446,059	33.23		97.5
	Under $40	3	14,526	2,984	20.54		66.2
40 and over	$40 to $80	21	124,853	44,774	35.86		115.6
	$80 to $180	30	316,718	111,516	35.21		113.5
	$180 & over	35	1,019,590	286,785	28.13		90.7

Average $31.02

433

The average inventory per $100 of sales of men's hats and caps for the years 1919, 1918, and 1914, combined, is $31.02. This amount is more than the corresponding average inventory of clothing in terms of sales of clothing. For the combined years, the inventories decrease as the stores increase in size. This is true without exception, when the stores are classified by size alone, and holds, with only an occasional exception, when they are classified both by size and location. The graphic part of Table 26 throws into bold relief the relations of stores of different size and location.

In Table 27, the average inventories per $100 of sales for departments handling men's hats and caps are given for 1919, 1918, and 1914. The average amount increased slightly between 1914 and 1918, but between 1918 and 1919 there was a considerable decrease. The amounts in each year decrease as the stores increase in size, but not with equal rapidity. When the stores are classified both by size and location, a similar decrease occurs, but it is less regular from group to group. This is probably due to the fact that the number of stores for some of the groups is

* Population figures are for 1920.

inadequate to reflect a true average. The table, however, shows conclusively the presence of this tendency, and it may be taken to characterize inventories of these lines of goods.

Table 28 shows the average inventories of men's furnishings per $100 of sales of these goods. For the combined years, the average amount is $39.30 for stores unclassified. For the stores located in cities with population under 40,000, it is $43.85 and for those located in cities with population of 40,000 and over, it is $37.74. That is, the average amount for all stores combined decreases as the size of the cities in which the stores are located increases, but this condition does not hold for stores of the same size but with different locations. The amounts, however, decrease as the stores increase in size. This is true not only for the stores in general, but also, with minor exceptions, when they are classified by the size of the city in which they are located. For this line of goods, the inventories on the whole are higher than for departments handling clothing or hats and caps, the amounts of difference, however, not being uniform when the

TABLE 27

RELATION OF INVENTORIES AND SALES OF MEN'S HATS AND CAPS FOR STORES
CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	1919			1918			1914		
		Number of Stores	\multicolumn{2}{}{Amount of Inventory per $100 of Sales}	Number of Stores	\multicolumn{2}{}{Amount of Inventory per $100 of Sales}	Number of Stores	\multicolumn{2}{}{Amount of Inventory per $100 of Sales}
			Actual	Graphic		Actual	Graphic		Actual	Graphic
Total (Average)	Total (Average)	62	$29.95		56	$32.84		36	$31.40	
	Under $40	4	76.15		6	57.04		20	48.48	
	$40 to $80	13	46.73		12	39.48		14	28.39	
	$80 to $180	26	31.17		13	34.76		8	31.90	
	$180 & over	19	27.08		14	28.50		4	28.19	
Under 40	Total (Average)	27	32.86		23	54.15		15	39.42	
	Under $40	4	76.15		6	57.04		7	68.14	
	$40 to $80	9	52.04		8	39.35		7	27.51	
	$80 to $180	12	29.44		9	27.32		1	16.96	
	$180 & over	2	15.21		-	-		-	-	
40 and over	Total (Average)	35	29.17		33	32.08		21	29.58	
	Under $40	-	-		-	-		3	20.54	
	$40 to $80	4	38.02		10	39.57		7	28.84	
	$80 to $180	14	32.54		9	40.42		7	33.66	
	$180 & over	17	27.89		14	28.50		4	28.19	

Average $29.95   Average $32.84   Average $31.40

stores are classified by size and location.

In Table 29, the inventories of men's furnishings per $100 of sales of corresponding goods are shown for the years 1919, 1918, and 1914. Between 1914 and 1918, the amounts increased and between 1918 and 1919, and 1914 and 1919, they decreased. There seems to be no well-defined effect on the averages produced by store location, but with almost no exceptions, the amounts decrease as the stores increase in size. It is interesting to compare the details of this table with those in the tables showing similar data for other departments. This the reader can do for himself from the data supplied.
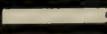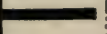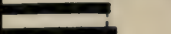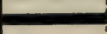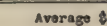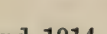
(4)—YEARLY INVENTORIES OF BOYS' AND CHILDREN'S CLOTHING PER $100 OF SALES OF BOYS' AND CHILDREN'S CLOTHING FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY IN WHICH LOCATED,* 1919, 1918, AND 1914.

In Table 30, the inventories of boys' and children's clothing per $100 of sales of these goods are shown for the years 1919, 1918, and 1914, combined. For the 134 store-years included, the average amount is $42.41. For the stores located in small cities it is $46.63, and for those located in large cities, $40.38. That is, the average amount is less for

* Population figures are for 1920.

TABLE 28

SALES AND INVENTORY OF MEN'S FURNISHINGS AND AMOUNT OF INVENTORY
PER $100 OF SALES FOR STORES CLASSIFIED BY SIZE AND BY SIZE
OF CITY, 1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting Inventory of Men's Furnishings				Ratio Which Amount of Inventory per $100 of Sales for Stores of Different Size in Cities of Different Size, is of the Amount for All Stores. Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
		Number of Store-years	Sales of Men's Furnishings	Inventory of Men's Furnishings	Amount per $100 of Sales		
Total (Average)	Total (Average)	166	$6,755,604	$2,654,798	$39.30		100.0
	Under $40	22	221,968	129,619	58.40		148.6
	$40 to $80	47	953,061	390,130	40.93		104.1
	$80 to $180	56	1,971,526	873,795	44.32		112.8
	$180 & over	41	3,609,049	1,261,254	34.95		88.9
Under 40	Total (Average)	74	1,722,962	755,460	43.85		111.6
	Under $40	19	169,996	112,697	66.29		168.7
	$40 to $80	26	468,190	187,898	40.13		102.1
	$80 to $180	25	817,995	349,745	42.76		108.8
	$180 & over	4	266,781	105,120	39.40		100.3
40 and over	Total (Average)	92	5,032,642	1,899,338	37.74		96.0
	Under $40	3	51,972	16,922	32.56		82.8
	$40 to $80	21	484,871	202,232	41.71		106.1
	$80 to $180	31	1,153,531	524,050	45.43		115.6
	$180 & over	37	3,342,268	1,156,134	34.59		88.0

Average $39.30

stores in the large than in the small cities. The table shows conclusively that the amounts decrease as the stores increase in size. While there are occasional exceptions to this rule, these can hardly be said to disprove the general principle. In this respect, the direction of change for stores of different size is in keeping with that shown for other departments and for entire stores.

In Table 31, the average inventories of boys' and children's clothing per $100 of sales of corresponding goods are shown for the years 1919, 1918, and 1914. For this line of merchandise, the amounts decreased between 1914 and 1918, and increased between 1918 and 1919. Unlike the other departments, the inventories in terms of sales were higher in 1919 than in 1918, and only slightly lower than in 1914.

While Table 30 shows that the average amount for the combined years is larger in the small than in the large cities, this is true only for 1914 and 1918. In 1919, the average amount was slightly larger for the stores in the large cities than for those in the

TABLE 29

RELATION OF INVENTORIES AND SALES OF MEN'S FURNISHINGS FOR STORES
CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	1919			1918			1914		
		Number of Stores	Amount of Inventory per $100 of Sales		Number of Stores	Amount of Inventory per $100 of Sales		Number of Stores	Amount of Inventory per $100 of Sales	
			Actual	Graphic		Actual	Graphic		Actual	Graphic
Total (Average)	Total (Average)	68	$36.06		61	$44.00		37	$39.50	
	Under $40	4	67.93		8	74.82		10	44.14	
	$40 to $80	17	41.31		18	40.35		12	41.52	
	$80 to $180	26	37.95		20	54.85		10	43.48	
	$180 & over	21	33.73		15	37.69		5	35.47	
Under 40	Total (Average)	32	38.76		28	50.59		14	46.30	
	Under $40	4	67.93		8	74.82		7	54.54	
	$40 to $80	12	40.54		9	37.42		5	44.06	
	$80 to $180	13	36.63		10	58.85		2	41.73	
	$180 & over	3	36.53		1	47.50		-	-	
40 and over	Total (Average)	36	35.09		33	41.66		23	37.71	
	Under $40	-	-		-	-		3	32.56	
	$40 to $80	5	42.53		9	42.53		7	39.44	
	$80 to $180	13	39.11		10	55.94		8	43.82	
	$180 & over	18	33.44		14	37.09		5	35.47	

Average $36.06   Average $44.00   Average $39.50

small cities. This is due, however, to the fact that no small stores in the large cities enter into the average. Moreover, while the amounts for the combined years generally decrease as the stores increase in size, this condition is not so clearly evident for the individual years, although to this general rule there are comparatively few and minor exceptions. Obviously, the number of stores used as samples influences the results of such a comparison and for this department the number of stores available is smaller and not so satisfactory, when distributed, as for the other departments. The significance of these figures should be interpreted in terms of the number of stores compared.
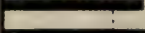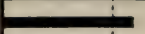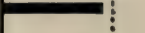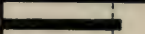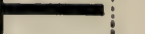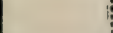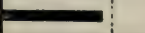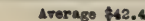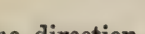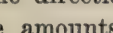
(5)—YEARLY INVENTORIES OF SHOES PER $100 OF SALES OF SHOES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY IN WHICH LOCATED,* 1919, 1918, AND 1914.

Based upon the experience of 123 store-years, as shown in Table 32, the average inventory of shoes per $100 of sales of shoes is $45.34. The corresponding amount for stores in small cities is $55.50 and for stores in large cities, $38.48. These averages include stores of different size and are influenced by the proportions in which stores of different size enter into the total. This should be kept in mind in using the averages for the stores

* Population figures are for 1920.

TABLE 30

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting Inventory of Boys' and Children's Clothing				Ratio Which Amount of Inventory per $100 of Sales for Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180	Per Cent.
		Number of Store-years	Sales of Clothing	Inventory of Clothing	Amount per $100 of Sales		
Total (Average)	Total (Average)	134	$1,781,508	$755,476	$42.41		100.0
Total (Average)	Under $40	18	30,851	16,648	53.96		127.2
	$40 to $80	39	134,827	74,638	55.36		130.5
	$80 to $180	50	391,165	194,812	49.80		117.4
	$180 & over	27	1,224,665	469,378	38.33		90.4
Under 40	Total (Average)	103	576,553	268,870	46.63		110.0
	Under $40	18	30,851	16,648	53.96		127.2
	$40 to $80	38	130,874	72,412	55.33		130.5
	$80 to $180	40	286,145	129,857	45.38		107.0
	$180 & over	7	128,683	49,953	38.82		91.5
40 and over	Total (Average)	31	1,204,955	486,606	40.38		95.2
	Under $40	-	-	-	-		-
	$40 to $80	1	3,953	2,226	56.31		132.8
	$80 to $180	10	105,020	64,955	61.85		145.8
	$180 & over	20	1,095,982	419,425	38.27		90.2

Average $42.41

in the different city-groups. A safer comparison is between stores of similar size, but different location. A comparison of this nature shows, on the whole, that stores in the small cities have inventories somewhat larger than those in the large cities. The average inventories in terms of sales vary inversely with the size of the stores. This is true not only of the stores unclassified, but also when they are grouped according to the size of the city in which they are located. The direction of change in the average amounts is in keeping with that shown for other departments and for stores as a whole.

In Table 33, the average inventories of shoes per $100 of sales of shoes are shown for the years 1919, 1918, and 1914. The average inventory in 1914 was $51.02. In 1918 it was $43.61; and in 1919, $44.95. That is, between 1914 and 1918, and between 1914 and 1919, the amounts decreased, while between 1918 and

TABLE 31

RELATION OF INVENTORIES AND SALES OF BOYS' AND CHILDREN'S CLOTHING FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	1919			1918			1914		
		Number of Stores	Amount of Inventory per $100 of Sales Actual	Graphic 0 20 40 60 80 100	Number of Stores	Amount of Inventory per $100 of Sales Actual	Graphic 0 20 40 60 80 100	Number of Stores	Amount of Inventory per $100 of Sales Actual	Graphic 0 20 40 60 80 100
Total (Average)	Total (Average)	97	$45.49		49	$36.49		88	$46.05	
	Under $40	8	38.79		7	51.86		8	71.84	
	$40 to $80	15	37.29		18	50.83		11	61.08	
	$80 to $180	26	53.27		19	41.62		7	59.24	
	$180 & over	15	42.72		8	32.09		4	37.62	
Under 40	Total (Average)	44	44.65		37	42.49		22	64.50	
	Under $40	8	36.79		7	51.86		6	71.84	
	$40 to $80	15	37.29		14	53.43		11	61.08	
	$80 to $180	20	45.66		15	36.61		5	65.95	
	$180 & over	6	39.45		1	54.02		-	-	
40 and over	Total (Average)	13	45.94		12	33.71		6	39.51	
	Under $40	-	-		-	-		-	-	
	$40 to $80	-	-		1	56.51		-	-	
	$80 to $180	4	61.02		4	50.61		2	61.14	
	$180 & over	9	41.37		7	31.86		4	37.62	

Average $45.49   Average $36.49   Average $46.05

1919, they increased. This change from year to year, however, does not characterize the stores when they are classified by size of city. The exceptions to the rule are evident from an inspection of the table.
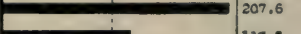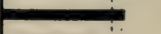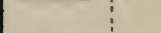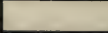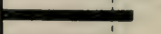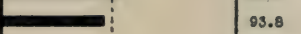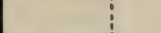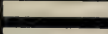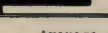
The inventories are larger in stores in small than in stores in large cities, the differences being of the same nature as those found for the other departments. Moreover, the amounts decrease as the stores increase in size. This rule characterizes the stores in general, but there are occasional exceptions to it when the stores are classified by size and location. It is difficult, in a word, to summarize Table 33, and the reader is advised to consult it himself.

C.—Summary.

(1). The amounts of yearly inventories per $100 of total net sales, both for a varying number of stores and for identical stores, decreased between 1914 and 1918, and between 1918 and 1919, the decrease between 1918 and 1919 being approximately four times as large as between 1914 and 1918. This is true not only for the country as a whole, but also generally true for stores in each of the different geographical divisions.

(2). The amounts of yearly inventories per $100 of total net

TABLE 32

SALES AND INVENTORY OF SHOES, AND AMOUNT OF INVENTORY PER $100 OF
SALES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY,
1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting Inventory of Shoes				Ratio Which Amount of Inventory per $100 of Sales for Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
		Number of Store-years	Sales of Shoes	Inventory of Shoes	Amount per $100 of Sales		
Total (Average)	Total (Average)	123	$2,298,207	$1,041,897	$45.34		100.0
	Under $40	22	104,456	98,320	94.13		207.6
	$40 to $80	34	318,765	169,564	53.19		117.3
	$80 to $180	38	629,489	318,118	50.54		111.5
	$180 & over	29	1,245,497	455,895	36.60		80.7
Under 40	Total (Average)	86	935,482	513,654	55.50		122.4
	Under $40	22	104,456	98,320	94.13		207.6
	$40 to $80	30	280,364	151,738	54.12		119.4
	$80 to $180	29	453,725	226,617	49.95		110.2
	$180 & over	5	86,937	36,979	42.54		93.8
40 and over	Total (Average)	37	1,372,725	528,243	38.48		84.9
	Under $40	-	-	-	-		-
	$40 to $80	4	38,401	17,826	46.42		102.4
	$80 to $180	9	175,764	91,501	52.06		114.8
	$180 & over	24	1,158,560	418,916	36.16		79.8

Average $45.34

sales decrease as stores increase in size, the range being approximately from $50 to $25, with an average for the combined years of $38 for stores changing in number from year to year, and $37.83 for 223 identical stores reporting for each year. A decrease of the inventories in terms of sales as the stores increase in size also characterizes the stores when they are classified by size of city in which located.

(3). The size of the city in which stores are located seems to have little effect upon the relation of inventories to sales for stores as units, the far more significant factor being the size of the stores.

(4). The average amounts of yearly inventories per $100 of total net sales in specified departments range from $27.54 to $45.34; the department having the lowest inventory being men's and young men's clothing, and the one having

TABLE 33

RELATION OF INVENTORIES AND SALES OF SHOES FOR STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919, 1918, AND 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	1919			1918			1914		
		Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic	Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic	Number of Stores	Amount of Inventory per $100 of Sales — Actual	Graphic
Total (Average)	Total (Average)	54	$44.95		47	$43.61		22	$51.02	
	Under $40	6	108.26		11	90.56		5	79.87	
	$40 to $80	14	50.31		15	56.16		7	53.52	
	$80 to $180	18	53.78		14	47.18		8	47.79	
	$180 & over	16	36.55		9	32.04		4	48.62	
Under 40	Total (Average)	40	53.69		33	56.21		13	61.53	
	Under $40	6	108.26		11	90.56		5	79.87	
	$40 to $80	13	51.13		12	56.49		5	55.73	
	$80 to $180	16	51.54		10	43.63		3	61.79	
	$180 & over	5	42.54		-	-		-	-	
40 and over	Total (Average)	14	37.86		14	35.78		9	44.27	
	Under $40	-	-		-	-		-	-	
	$40 to $80	1	39.95		1	82.12		2	46.78	
	$80 to $180	2	63.27		4	63.39		3	56.10	
	$180 & over	11	36.56		9	32.04		4	48.62	

Average $44.95   Average $43.61   Average $51.00

the highest inventory being shoes.

(5). The amounts of yearly inventories per $100 of total net sales in certain specified departments decrease as the stores increase in size. They are generally larger for stores in small cities than for stores of similar size in large cities. They decreased between 1914 and 1918, and between 1918 and 1919.

2.—YEARLY INVENTORIES PER $100 OF PURCHASES, 1919, 1918, AND 1914.

Yearly purchases in terms of sales were discussed in Section III and yearly inventories in terms of sales in the first part of Section IV. The comparisons were made between the cost and the sale price of goods. Purchases are expressed in terms of the price paid to the manufacturer, while inventories are taken, for the most part, at cost with discounts not deducted. Sales, on the other hand, represent the sale value of goods actually sold. They do not include the sale value of goods returned by customers unless charges are made for them. The present discussion has to do with the relations between inventories and purchases; that is, values taken upon the same basis.

Based upon an experience of 831 store-years, $54,597,561 of purchases, and $28,496,834 of inventories, the average inventory per $100 of pur-

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chases, for the combined years, is $52.19. In 1919, the amount was $46.85; in 1918, $57.57; and in 1914, $58.19. Between 1914 and 1918—a four-year period—the average amount decreased by $0.62, while in a single year—1918 to 1919—it decreased by $10.72. Inventories in terms of purchases were high in 1914 and 1918, and low in 1919, as compared with the average for the three years. These averages are based upon stores which differ from year to year in size, location, and number. Use was made of all the data that were available. Inasmuch as the number, location, and size of the stores change from year to year, the amounts are not strictly comparable. Yet, what is true of the stores without regard to size is also, on the whole, true when they are classified by size, and compared by years. This may be seen by comparing Tables 36 to 39, inclusive. Of course, there are exceptions for certain of the store-groups, but these are neither sufficiently numerous nor large to disturb the general conclusion.
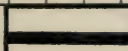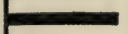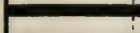
It is interesting to express on a per store basis the purchases and inventories shown in Table 34. In this way, the changes in both from year to year are more clearly set out.

In 1914, the average amount of purchases per store was $43,292; in 1918, it was $60,881; and in 1919, $82,140. That is, between 1914 and 1918, the average amount increased 40.6 per cent., and between 1914 and 1919, 89.7 per cent. On the other hand, between 1918 and 1919, the average amount of purchases per store increased 34.9. In contrast with these increases in purchases per store, it is of interest to compare the corresponding increases in inventories. In 1914, the average inventory per store was $25,191; in 1918, it was $35,052; and in 1919, $38,484. That is, the average amount increased between 1914 and 1918 by 39.1 per

TABLE 34

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL PURCHASES, 1919, 1918, AND 1914

Years	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for Each Year, is of the Amount for All Years	Per Cent.
	Number of Store-years	Total Purchases	Total Inventory	Amount per $100 of Total Purchases	Per Cent. 0 30 60 90 120 150 180 210	
Total (Average)	831	$54,597,561	$28,496,834	$52.19		100.0
1919	339	27,845,339	13,045,977	46.85		89.8
1918	310	18,873,036	10,866,081	57.57		110.3
1914	182	7,879,186	4,584,776	58.19		111.5

Average $52.19

cent., and between 1914 and 1919 by 52.8 per cent. Between 1918 and 1919, however, the average inventory per store increased 9.8 per cent. The increase of 40.6 per cent. in purchases between 1914 and 1918 corresponds to an increase of 39.1 per cent. in inventories. Between 1914 and 1919, an increase of 89.7 per cent. in pur-

chases corresponds to an increase of 52.8 per cent. in inventories; while between 1918 and 1919 an increase of 34.9 per cent. in purchases corresponds to an increase of 9.8 per cent. in inventories, the per cent. of increase in purchases being 3.6 times as large as the per cent. of increase in inventories.

TABLE 35

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL PURCHASES FOR 177 IDENTICAL STORES, 1919, 1918, AND 1914

Years	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for 177 Identical Stores for Each Year, is of the Amount for All Years Per Cent.	Per Cent.
	Number of Store-years	Total Purchases	Total Inventory	Amount per $100 of Total Purchases	0 20 40 60 80 100 120 140	
Total (Average)	531	$36,274,473	$18,892,641	$52.08		100.0
1919	177	16,682,297	7,689,843	46.10		88.5
1918	177	11,960,217	6,761,545	56.53		108.5
1914	177	7,631,959	4,441,253	58.19		111.7

Average $52.08
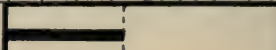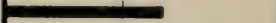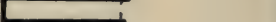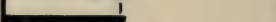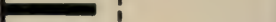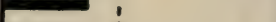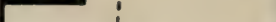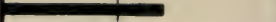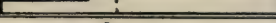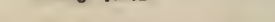
These percentages of increase from year to year in purchases and inventories per store refer to a varying number of stores. The relative decrease in inventories per $100 of purchases in 1919 may be due to the number and type of stores involved. Whether or not this is true may be determined if a group of identical stores is compared from year to year. This is done in Table 35.

Table 35 shows for 177 stores for each of the years 1919, 1918, and 1914 the average amount of inventories per $100 of total purchases. For the combined years the amount

is $52.08. In 1919 it was $46.10; in 1918, $56.53, and in 1914, $58.19. For these identical stores the amounts decreased between 1914 and 1918, and between 1918 and 1919. The amount of decrease in the one year between 1918 and 1919, however, is approximately six times as great as in the four years between 1914 and 1918. When the two groups of stores are considered, inventories in terms of purchases in 1919 are far below what they were in either of the other years. Paralleling the discussion of Table 34, which shows the average amount of purchases and inventories per store,

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TABLE 36

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES, 1919, 1918, AND 1914, COMBINED

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for Stores of Different Size, is of the Amount for All Stores	Per Cent.
	Number of Store-years	Total Purchases	Total Inventory	Amount per $100 of Total Purchases	Per Cent. 0 30 60 90 120 150 180 210	
Total (Average)	531	$54,597,561	$28,496,834	$52.19		100.0
Under $20	44	585,231	488,175	83.42		155.5
$20 to $40	205	4,660,503	3,322,917	71.30		136.6
$40 to $60	181	7,026,654	4,424,933	62.97		120.7
$60 to $80	115	5,968,938	3,434,182	57.53		110.2
$80 to $100	73	4,721,678	2,650,453	56.13		107.5
$100 to $140	85	7,097,456	3,863,737	54.44		104.3
$140 to $180	41	4,611,178	2,506,695	54.36		104.2
$180 to $220	21	2,766,403	1,210,202	43.75		83.8
$220 to $300	22	4,121,218	1,701,936	41.30		79.1
$300 to $500	22	5,787,623	2,207,474	38.14		73.1
$500 & over	12	7,250,679	2,686,130	37.05		71.0
Under $40	249	5,245,734	3,811,092	72.65		139.2
$40 to $80	306	12,995,592	7,859,115	60.48		115.9
$80 to $180	199	16,430,312	9,020,885	54.90		105.2
$180 & over	77	19,925,923	7,805,742	39.17		75.1

Average $52.19

it is of interest to observe that, while the average amount of purchases for these identical stores between 1918 and 1919 increased 39.5 per cent., the average inventory per store increased 13.7 per cent. The per cent. of increase in purchases was approximately three times as large as that in inventories. This relation follows closely that shown in Table 34 for stores which vary in number and location between 1918 and 1919.

Moreover, the change from year to year in the amount of inventories per $100 of purchases, shown in Table 35,
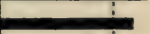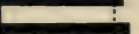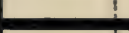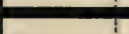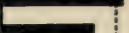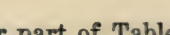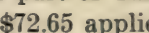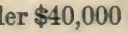
holds for the same stores when classified by size. The amounts for the stores so classified are shown in Tables 40 to 43, inclusive.

A.—Yearly Inventories per $100 of Purchases for Stores Classified by Size, 1919, 1918, and 1914.

Tables 36 to 39, inclusive, show by years the average amounts of inventories per $100 of purchases for stores classified by size. In each of these years the amounts decrease as the stores increase in size. The change

TABLE 37

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for Stores of Different Size, is of the Amount for All Stores Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
	Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases		
Total (Average)	339	$27,845,339	$13,045,977	$46.85		100.0
Under $20	3	41,451	34,400	82.99		177.1
$20 to $40	51	1,165,506	764,875	65.63		140.1
$40 to $60	83	2,953,808	1,778,433	60.21		128.5
$60 to $80	49	2,526,538	1,373,190	54.35		116.0
$80 to $100	36	2,274,047	1,137,306	50.01		106.7
$100 to $140	47	3,986,542	1,984,658	49.78		106.3
$140 to $180	24	2,714,179	1,414,121	52.10		111.2
$180 to $220	11	1,380,971	586,629	42.48		90.7
$220 to $300	14	2,667,476	1,049,929	39.36		84.0
$300 to $500	13	3,325,056	1,215,162	36.55		78.0
$500 & over	8	4,809,765	1,707,274	35.50		75.8
Under $40	54	1,206,957	799,275	66.23		141.4
$40 to $80	132	5,480,346	3,151,623	57.51		122.8
$80 to $180	107	8,974,768	4,536,065	50.54		107.9
$180 & over	46	12,183,268	4,558,994	37.42		79.9

Average $46.85

from store-group to store-group is the same as that observed in the relation of inventories to total net sales, although the actual amounts, of course, differ.
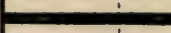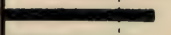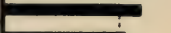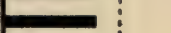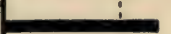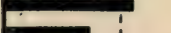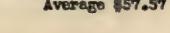
For the combined years, the average inventory per $100 of purchases for the 831 store-years is $52.19. The maximum amount, when the stores are classified into narrow groups, is $83.42 and the minimum, $37.05. The maximum and minimum amounts, respectively, apply to the smallest and the largest stores. When the stores are classified into wide groups, as in the lower part of Table 36, the maximum of $72.65 applies to stores with sales under $40,000 and the minimum, $39.17, to those having sales of $180,000 and over.

The relations of inventories to purchases for 1919 are given in Table 37. In this year, however, the average amount of inventories per $100 of total purchases was $5.34 less than in the combined years, and the regularity of the decrease from store-group to store-group somewhat less perfect. The amounts clearly decrease as the stores increase in size.

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TABLE 38

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL PURCHASES FOR STORES CLASSIFIED BY SIZE, 1918

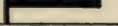| Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for Stores of Different Size, is of the Amount for All Stores — Per Cent. 0 30 60 90 120 150 180 210	Per Cent.
	Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases		
Total (Average)	310	$18,873,036	$10,866,081	$57.57		100.0
Under $20	16	250,419	209,439	83.54		145.3
$20 to $40	86	2,008,742	1,509,893	75.17		130.6
$40 to $60	71	2,677,251	1,801,231	67.28		116.9
$60 to $80	45	2,387,407	1,451,586	60.79		105.6
$80 to $100	26	1,717,452	1,097,555	63.91		111.0
$100 to $140	27	2,244,377	1,367,612	60.94		105.9
$140 to $180	12	1,303,077	832,712	63.90		111.0
$180 to $220	7	1,026,411	457,137	44.54		77.4
$220 to $300	8	1,453,742	652,007	44.85		77.9
$300 to $500	7	1,919,402	757,171	39.45		68.5
$500 & over	3	1,884,756	729,938	38.73		67.3
Under $40	104	2,259,161	1,719,332	76.10		132.2
$40 to $80	116	5,064,658	3,252,817	64.22		111.6
$80 to $180	65	5,264,996	3,297,879	62.64		108.8
$180 & over	25	6,284,311	2,596,253	41.31		71.8

Average $57.57
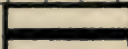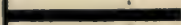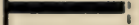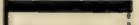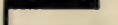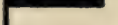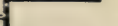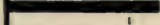
The maximum amount for this year was $82.99 and the minimum, $35.50. When the stores are classified into wider groups, the maximum is $66.23 and the minimum, $37.42. The graphic part of Table 37 shows strikingly the difference from store-group to store-group and suggests the operation of a fundamental principle. This decrease with stores of increasing size is to be expected in view of the fact that stock turns vary directly as the stores increase in size. Inventories, therefore, would be relatively less in large, than in small stores.

Tables 38 and 39 show the average amounts of inventories per $100 of purchases for the years 1918 and 1914, respectively. While the averages for these years are higher than for 1919, the amounts decrease with almost the same regularity, as the stores increase in size, as do those for 1919 and for the combined years. An inspection of these tables will show more concretely, than can possibly be stated, the changes from store-group to store-group.

Tables 36 to 39, inclusive, refer to stores, the number of which varies

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TABLE 39

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES FOR STORES CLASSIFIED BY SIZE, 1914

Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for Stores of Different Size, is of the Amount for All Stores	Per Cent.
	Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases	Per Cent. 0 30 60 90 120 150 180 210	
Total (Average)	182	$7,879,186	$4,584,776	$58.19		100.0
Under $20	25	293,361	244,336	83.29		143.1
$20 to $40	66	1,466,255	1,048,149	70.52		121.2
$40 to $60	37	1,395,595	845,269	60.57		104.1
$60 to $80	21	1,054,993	609,606	57.78		99.3
$80 to $100	11	730,179	415,592	56.92		97.8
$100 to $140	11	866,537	511,467	59.02		101.4
$140 to $180	5	593,922	259,862	43.75		75.2
$180 to $220	3	359,021	166,436	46.36		79.7
$220 to $300	-	-	-	-		-
$300 to $500	2	543,165	235,141	43.29		74.4
$500 & over	1	556,158	248,918	44.76		76.9
Under $40	91	1,779,616	1,292,485	72.63		124.8
$40 to $80	58	2,450,588	1,454,875	59.37		102.0
$80 to $180	27	2,190,638	1,186,921	54.18		93.1
$180 & over	6	1,458,344	650,495	44.61		76.7

Average $58.19
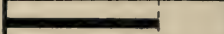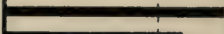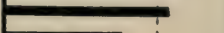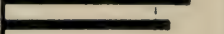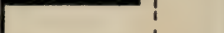
from year to year. A more significant comparison of the relation of inventories to purchases for stores of different size may be made from Tables 40 to 43, inclusive, in which data for identical stores are given. For these stores, the location and the number remain the same from year to year, the sales alone constituting a variable element. On the basis of the records of these identical stores, the inventories per $100 of purchases decrease as the stores increase in size. This is true not only for the combined, but also for the individual

years. Moreover, this decrease holds for the stores when they are classified by size and by location. This tendency is reflected in the actual amounts and in the graphic summary shown in Tables 40 to 43, inclusive.

From Tables 36 to 43, inclusive, it may be concluded as follows: When stores are classified by size and the groups into which they are put are wide enough to remove exceptional instances, the average inventories per $100 of purchases, for the combined years 1919, 1918, and 1914, range from approximately $75 to $39. In

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TABLE 40

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES FOR 177 IDENTICAL STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1919, 1918, AND 1914, COMBINED

| Size of City (in 000's) | Classified Total Net Sales (in 000's) | Stores Reporting on Inventory | | | | Ratio Which Amount of Inventory per $100 of Total Purchases for 177 Identical Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0 20 40 60 80 100 120 140 | Per Cent. |
		Number of Store-years	Total Purchases	Total Inventory	Amount per $100 of Total Purchases		
Total (Average)	Total (Average)	531	$36,274,473	$18,892,641	$52.08		100.0
	Under $40	172	3,486,087	2,617,748	75.09		144.2
	$40 to $80	183	7,747,064	4,707,089	60.76		116.7
	$80 to $180	121	9,791,298	5,487,080	56.04		107.6
	$180 & over	55	15,250,024	6,080,724	39.87		76.6
Under 40	Total (Average)	393	17,195,611	10,657,323	61.98		119.0
	Under $40	156	3,146,732	2,405,041	76.43		146.8
	$40 to $80	148	6,115,347	3,912,361	63.98		122.8
	$80 to $180	78	6,219,113	3,538,222	55.89		109.2
	$180 & over	11	1,714,419	801,699	46.76		89.8
40 and over	Total (Average)	138	19,078,862	8,235,318	43.16		82.9
	Under $40	16	339,355	212,707	62.68		120.4
	$40 to $80	35	1,631,717	794,728	48.71		93.5
	$80 to $180	43	3,572,185	1,948,858	54.56		104.8
	$180 & over	44	13,535,605	5,279,025	39.00		74.9

Average $52.08

1919 the range is somewhat less, the small stores having an amount approximately one and three-quarters times as large as the large stores. Similar differences hold for 1918 and 1914.

B.—*Yearly Inventories per $100 of Total Purchases for Stores Classified by Size and by Size of City in Which Located,* 1919, 1918, and 1914.*

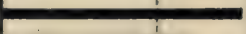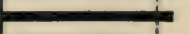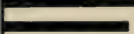The foregoing tables show that the size of stores affects the relation of

* Population figures are for 1920.

inventories to purchases. Has the size of the cities in which stores are located a similar influence? The answer to this question is found in Tables 40 to 43, inclusive.

In Table 40, for 177 stores reporting for 1919, 1918, and 1914, the average inventory per $100 of purchases for stores located in cities with population under 40,000 is $61.98. The corresponding amount, for the stores located in cities with population of 40,000 and over, is $43.16. That is, there is a difference of $18.82. These averages, however, are affected by the proportion of stores of different size

TABLE 41

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES FOR 177 STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for 177 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores	Per Cent.
		Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases	Per Cent. 0 20 40 60 80 100 120 140 160	
	Total (Average)	177	$16,682,297	$7,689,843	$46.10		100.0
Total (Average)	Under $40	26	554,574	398,566	71.87		155.9
	$40 to $80	62	2,538,509	1,463,044	57.63		125.0
	$80 to $180	58	4,687,892	2,388,494	50.95		110.5
	$180 & over	31	8,901,322	3,439,745	38.64		83.8
	Total (Average)	131	7,553,274	4,093,635	54.20		117.6
Under 40	Under $40	24	513,103	374,231	72.93		158.2
	$40 to $80	55	2,219,786	1,287,657	58.01		125.8
	$80 to $180	44	3,564,884	1,847,408	51.82		112.4
	$180 & over	8	1,255,501	584,338	45.54		101.0
	Total (Average)	46	9,129,023	3,596,208	39.39		85.4
40 and over	Under $40	2	41,471	24,339	58.67		127.3
	$40 to $80	7	315,725	175,387	55.03		119.4
	$80 to $180	14	1,123,008	541,086	48.18		104.5
	$180 & over	23	7,645,821	2,855,406	37.35		81.0
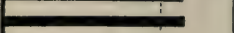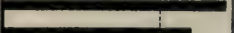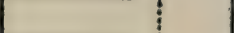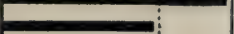
Average $46.10

which enter into the total. If the number of small stores in the small cities is proportionately larger than the number of small stores in the large cities, or conversely, if the number of large stores in the small cities is relatively greater than the number of large stores in the larg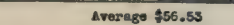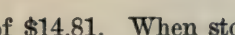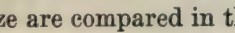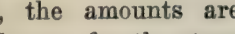e cities, the averages are not truly comparable, inasmuch as the amounts decrease as stores increase in size. The limitations of such a general average may be overcome in part by comparing stores of approximately the same size but of different location. This is done in Tables 40 to 43.

The average inventory per $100 of purchases, for stores with sales under $40,000 and located in cities with population under 40,000, is $76.43. The corresponding amount for stores of similar size located in the large cities is $62.68. A similar difference holds for the stores with sales from $40,000 to $80,000 but located in cities of different size. For those with annual sales of $80,000 to $180,000, however, the average amounts are not noticeably different for stores in the two city-groups, yet there is a difference. A similar contrast holds for stores with annual sales of $180,000

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TABLE 42

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100
OF TOTAL PURCHASES FOR 177 STORES CLASSIFIED BY SIZE
AND BY SIZE OF CITY, 1918

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for 177 Stores of Different Size in Cities of Different Size, is of the Amount for All Stores Per Cent. 0. 20 40 60 80 100 120 140	Per Cent.
		Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases		
Total (Average)	Total (Average)	177	$11,960,217	$6,761,545	$56.53		100.0
	Under $40	55	1,151,877	926,403	80.43		142.3
	$40 to $80	56	2,872,976	1,862,334	64.82		114.7
	$80 to $180	38	3,045,006	1,982,324	65.10		115.2
	$180 & over	18	4,890,358	1,990,484	40.70		72.0
Under 40	Total (Average)	131	5,717,567	3,880,205	67.86		120.0
	Under $40	52	1,103,809	887,430	80.40		142.2
	$40 to $80	52	2,233,109	1,514,217	67.81		120.0
	$80 to $180	24	1,921,731	1,261,198	65.63		116.1
	$180 & over	3	458,918	217,360	47.36		83.8
40 and over	Total (Average)	45	6,242,650	2,881,340	46.16		81.7
	Under $40	3	48,068	38,973	81.08		143.4
	$40 to $80	14	639,867	348,117	54.40		96.2
	$80 to $180	14	1,123,275	721,126	64.20		113.6
	$180 & over	15	4,431,440	1,773,124	40.01		70.8

Average $56.53
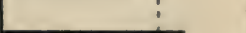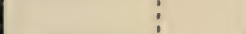
and over, but located in different sized cities.

In Table 41, 177 stores are classified by size and by location, the purpose being to determine the relation of inventories to purchases for 1919. The feature of this table which is most interesting for our present purpose is the relation of these two items for stores of essentially the same size in cities of different size. The average amount of inventories per $100 of purchases for stores in the small cities is $54.20; for the stores in the large cities it is $39.39. That is, there is a difference of $14.81. When stores of the same size are compared in the two city-groups, the amounts are conspicuously larger, for the stores with annual sales less than $80,000, in the s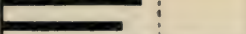mall as contrasted with those in the large cities. For the stores with sales of $80,000 and over, there is less difference in the amounts and substantial uniformity for stores with sales from $80,000 to $180,000. It must be remembered that, while the size-groups are identical, the actual size of the stores is not necessarily the same. Since the condition in 1919 for

TABLE 43

TOTAL PURCHASES, TOTAL INVENTORY, AND AMOUNT OF INVENTORY PER $100 OF TOTAL PURCHASES FOR 177 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Inventory				Ratio Which Amount of Inventory per $100 of Total Purchases for 177 Stores of Different Size, is of the Amount for All Stores. Per Cent. 0 20 40 60 80 100 120 140 160	Per Cent.
		Number	Total Purchases	Total Inventory	Amount per $100 of Total Purchases		
Total (Average)	Total (Average)	177	$7,631,959	$4,441,253	$58.19		100.0
Total (Average)	Under $40	91	1,779,636	1,292,785	72.64		124.8
	$40 to $80	55	2,335,579	1,381,711	59.16		101.7
	$80 to $180	25	2,058,400	1,116,262	54.23		93.2
	$180 & over	6	1,458,344	650,495	44.61		76.7
Under 40	Total (Average)	131	3,924,770	2,683,483	68.37		117.5
	Under $40	80	1,529,820	1,143,380	74.74		128.4
	$40 to $80	41	1,662,452	1,110,487	66.80		114.8
	$80 to $180	10	732,498	429,616	58.65		100.8
	$180 & over	-	-	-	-		-
40 and over	Total (Average)	46	3,707,189	1,757,770	47.42		81.5
	Under $40	11	249,816	149,405	59.81		102.8
	$40 to $80	14	673,127	271,224	40.29		69.2
	$80 to $180	15	1,325,902	686,646	51.79		89.0
	$180 & over	6	1,458,344	650,495	44.61		76.7

Average $58.19

this group of stores holds for 1918, and is closely approximated in 1914, it may be concluded that city-location does not have the same influence in determining the relation of inventories to purchases for the large as it does for the small stores.

It is unnecessary to dwell upon the differences in the average amounts of inventories in terms of purchases for the years 1918 and 1914 for stores of different size and location. Roughly speaking, the direction of change from the small to the large cities is uniform for the two years, but there are somewhat greater differences between the amounts for stores of the same size in cities of different size in 1914 than in 1918.

From Tables 40 to 43, inclusive, respecting the effect of store location upon the relation of inventories to purchases, it may be concluded as follows: First, the average inventories per $100 of purchases are larger for stores in the small than in the large cities. This is true in the individual, as well as in the combined years. Second, the average amounts in the two city-groups for stores with sales less than $80,000 vary more than for those with sales of $80,000 and

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over. In general, the larger the stores the smaller the differences between the inventories per $100 of total purchases in stores in the small and in the large cities.

C.—Summary.

(1). The average inventory per $100 of total purchases for the three years combined, for a group of stores varying in number from year to year is $52.19; for a group of identical stores, it is $52.08.

(2). The average inventory per $100 of total purchases decreased between 1914 and 1918, and between 1918 and 1919, the amount of decrease in the single year between 1918 and 1919 being approximately three times as large as in the four-year period between 1914 and 1918.

(3). The average inventories per $100 of total purchases decrease as stores increase in size, the range of amounts for stores during the combined years being approximately $75 to $39. This condition characterizes stores in both the combined and the individual years.

(4). The average inventory per $100 of total purchases is larger for stores in small than for stores in large cities, the differences becoming less, however, as the stores increase in size.

MERCHANTS were asked in the questionnaire to report for each of the years 1919, 1918, and 1914 the total amount of their cash discounts. In the following section discounts are discussed in relation to purchases for stores classified by years, by size, and by location.

1.—PURCHASE DISCOUNTS, 1919, 1918, AND 1914.

Based upon the experience of 765 store-years, $50,929,289 total purchases, and $1,784,588 total discounts, the average per cent. of purchase discounts for the combined years is 3.5. In 1919, the corresponding per cent. was 3.4; in 1918, 3.3; and in 1914, 4.4. These ratios apply to all stores reporting in any one of the years in question.
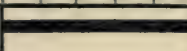
As will be noted from Table 44, the average per cents decreased between 1914 and 1918, and slightly increased between 1918 and 1919. The same condition also holds for a group of identical stores reporting for each of the years. The average for the 163 stores for the combined years is 3.7. In 1919 it was 3.6; in 1918, 3.3; and in 1914, 4.4. That is, for the two groups of stores, the average per cents for 1914 and 1918 are identical. For 1919, the difference in the per cents for the two groups is negligible.

What is true for the stores which vary in number from year to year, when treated as a total, is also true with minor exceptions when they are classified by size. Tables 46 to 49, inclusive, give the percentages for the stores classified both in narrow and in wide groups. It is unnecessary to point out the differences from year to year for each of the various

TABLE 44

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS, 1919, 1918, AND 1914

Years	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for Each Year, is of the Average for All Years	Per Cent.
	Number of Store-years	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	765	$50,929,289	$1,784,588	3.5		100.0
1919	311	26,117,864	884,736	3.4		97.1
1918	286	17,473,565	574,980	3.3		94.3
1914	168	7,337,860	324,872	4.4		125.7

Average 3.5

TABLE 45

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR
163 IDENTICAL STORES, 1919, 1918, AND 1914

Years	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for Each Year for 163 Identical Stores, is of the Average for All Years	Per Cent.
	Number of Store-years	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120	
Total (Average)	489	$33,528,940	$1,232,249	3.7		100.0
1919	163	15,542,320	554,036	3.6		97.3
1918	163	10,882,936	362,783	3.3		89.2
1914	163	7,103,684	315,430	4.4		118.9

Average 3.7

classes. This the reader may do for himself. It may be worth while, however, to indicate the change for a single group of stores. For this purpose those with sales of less than $40,000 are used. In 1919 the average percentage for this class was 2.6. In 1918 it was 2.6, but in 1914 it was 3.7. That is, the direction of change from year to year for this group agrees with that for the stores as a whole.
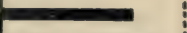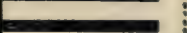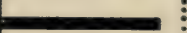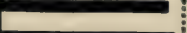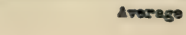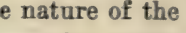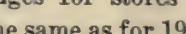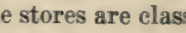
The change from year to year for identical stores when unclassified is closely paralleled when they are grouped by size. The actual percentages are shown in Tables 51 to 54. For the stores having sales of $80,000 to $180,000, the change from year to year is as follows: In 1919 the average was 3.2; in 1918 it was 3.2; and in 1914, 4.9. The percentages from year to year for the other stores classified by size may be seen by referring to Tables 52 to 54.

A.—Purchase Discounts for Stores Classified by Size, 1919, 1918, and 1914.

The average percentage of purchase discounts, for the combined years 1919, 1918, and 1914, for stores of all sizes, is 3.5. For the stores with sales under $20,000, the amount is 2.5, and for those with sales of $500,000 and over, it is 3.8. If the stores are classified in wide groups, as in the lower part of Table 46, the average percentage for the stores with sales of less than $40,000 is 3.0; for those with sales of $180,000 and over, it is 4.0. The percentages increase as the stores increase in size. To this rule there are no exceptions when the stores are grouped in wide classes, and only minor ones when they are classified into narrow groups. This condition holds both for the combined and the individual years.

TABLE 46

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR
STORES CLASSIFIED BY SIZE, 1919, 1918, AND 1914, COMBINED

Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for Stores of Different Size, is of the Average for All Stores	Per Cent.
	Number of Store-years	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	765	$50,929,239	$1,784,588	3.5		100.0
Under $20	45	611,193	15,382	2.5		71.4
$20 to $40	182	4,080,593	123,756	3.0		85.7
$40 to $60	165	6,093,480	183,407	3.0		85.7
$60 to $80	111	5,712,268	194,790	3.4		97.1
$80 to $100	70	4,513,335	140,492	3.1		88.6
$100 to $140	83	6,951,620	232,645	3.3		94.3
$140 to $180	36	4,020,337	144,966	3.6		102.9
$180 to $220	21	2,760,789	110,294	4.0		114.3
$220 to $300	20	3,759,641	135,862	3.6		102.9
$300 to $500	20	5,155,354	232,311	4.5		128.6
$500 & over	12	7,270,679	272,685	3.8		108.6
Under $40	227	4,691,786	139,138	3.0		85.7
$40 to $80	276	11,805,748	378,197	3.2		91.4
$80 to $180	189	15,485,292	518,101	3.3		94.3
$180 & over	73	18,946,463	749,152	4.0		114.3

Average 3.5

In 1919, the average percentage of purchase discounts was 3.4. The minimum amount was 1.8 and the maximum, 4.4. Roughly, the extremes correspond to the small and the large stores, respectively, the percentages between varying directly with the size of the stores. How nearly this condition holds for 1919 is shown graphically and by per cents in Table 47.
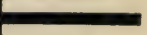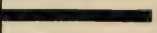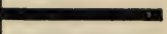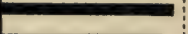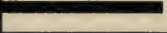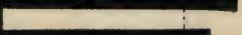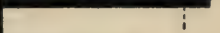
In 1918, the average per cent. of purchase discounts was approximately the same as in 1919. Moreover, the nature of the change in the percentages for stores of increasing size is the same as for 1919. For 1918, when the stores are classified into narrow groups, the minimum is 2.1, while the maximum is 4.5. When they are classified into wide groups the range extends from 2.6 to 3.8—the minimum per cents in 1918 and 1919 being identical and the maximum closely agreeing.

In 1914 the average per cent. of

TABLE 47

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for Stores of Different Size, is of the Average for All Stores Per Cent.	Per Cent.
	Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	0 20 40 60 80 100 120 140	
Total (Average)	311	$26,117,864	$884,736	3.4		100.0
Under $20	3	45,973	813	1.8		52.9
$20 to $40	47	1,026,571	26,596	2.6		76.5
$40 to $60	70	2,465,966	69,605	2.8		82.4
$60 to $80	48	2,474,542	73,549	3.0		88.2
$80 to $100	32	2,033,015	55,558	2.7		79.4
$100 to $140	47	4,010,368	129,548	3.2		94.1
$140 to $180	20	2,292,092	69,016	3.0		88.2
$180 to $220	11	1,375,357	46,053	3.3		97.1
$220 to $300	13	2,493,225	90,644	3.6		105.9
$300 to $500	12	3,070,990	133,666	4.4		129.4
$500 & over	8	4,829,765	189,688	3.9		114.7
Under $40	50	1,072,544	27,409	2.6		76.5
$40 to $80	118	4,940,508	143,154	2.9		85.3
$80 to $180	99	8,335,475	254,122	3.0		88.2
$180 & over	44	11,769,337	460,051	3.9		114.7
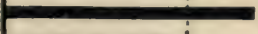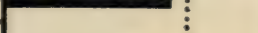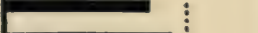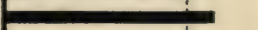
Average 3.4

purchase discounts was 4.4—an amount approximately 1 per cent. higher than in 1918 and 1919. In this year, as in the others, the percentages increase as the stores increase in size, although the regularity is somewhat less perfect, due probably to the few stores with sales of $140,000 and over which reported for this year. When the stores are classified in wide groups, however, as in the lower part of Table 49, the regularity of increase from store-group to store-group shows itself.

Of course, the percentages shown in Tables 46 to 49 are averages. It is impossible to treat the stores individually in this respect, but an approximation to such a treatment is contained in Table 50, the purpose of which is to support the averages in Tables 46 to 49 by giving the number of stores which reported different purchase discount rates. It will be seen from this table that some stores have discounts less than 1 per cent. and some in excess of 7 per cent. For the combined years, however, most

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TABLE 48

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR
STORES CLASSIFIED BY SIZE, 1918

| Classified Total Net Sales (in 000's) | Stores Reporting on Purchase Discounts | | | | Ratio Which Purchase Discount for Stores of Different Size, is of the Average for All Stores Per Cent. | Per Cent. |
	Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	0 20 40 60 80 100 120 140	
Total (Average)	286	$17,473,565	$574,980	3.3		100.0
Under $20	19	280,530	5,809	2.1		63.6
$20 to $40	75	1,655,479	44,082	2.7		81.8
$40 to $60	51	2,344,248	65,186	2.8		84.8
$60 to $80	43	2,231,763	73,935	3.3		100.0
$80 to $100	26	1,695,883	48,917	2.9		87.9
$100 to $140	26	2,158,623	66,429	3.1		93.9
$140 to $180	13	1,388,257	54,857	4.0		121.2
$180 to $220	7	1,026,411	45,396	4.4		133.3
$220 to $300	7	1,266,416	43,218	3.4		103.0
$300 to $500	6	1,541,199	69,947	4.5		136.4
$500 & over	3	1,884,756	57,204	3.0		90.9
Under $40	94	1,936,009	49,891	2.6		78.8
$40 to $80	104	4,576,011	139,121	3.0		90.9
$80 to $180	65	5,242,763	170,203	3.2		97.0
$180 & over	23	5,718,782	215,765	3.8		115.2

Average 3.3

stores reported rates between 3 and 4 per cent., although approximately as many had rates of 2 to 3 per cent. In 1919, the most common percentage was 3 to 4. In 1918 it was 2 to 3; and in 1914, 5 to 6. How different the per cents are for stores of different size is shown by the table.
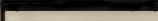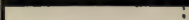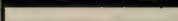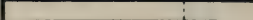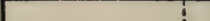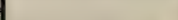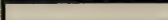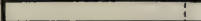
What is true for the stores treated in Tables 46 to 49 is also true with almost the same regularity for the stores shown in Tables 51 to 54, inclusive. The stores in the latter tables are identical as operating units

from year to year, although they change in size. In spite of this fact, however, they may be compared by size with less error than those in Tables 46 to 49 where not only the number, but also the size and location vary from year to year.

Tables 51 to 54, inclusive, show that purchase discount rates increase as the stores increase in size. For the combined years, the minimum per cent. is 3.3, while the maximum is 4.0. In 1919, the smallest was 2.9 and the largest, 3.9. In 1918, the

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TABLE 49

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR
STORES CLASSIFIED BY SIZE, 1914

Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for Stores of Different Size, is of the Average for All Stores	Per Cent.
	Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	168	$7,337,860	$324,872	4.4		100.0
Under $20	23	284,690	8,760	3.1		70.5
$20 to $40	60	1,398,543	53,078	3.8		86.4
$40 to $60	34	1,283,266	48,616	3.8		86.4
$60 to $80	20	1,005,963	47,306	4.7		106.8
$80 to $100	12	784,437	36,017	4.6		104.5
$100 to $140	10	782,629	36,666	4.7		106.8
$140 to $180	3	339,988	21,093	6.2		140.9
$180 to $220	3	359,021	18,845	5.2		118.2
$220 to $300	-	-	-	-		-
$300 to $500	2	543,165	28,698	5.3		120.5
$500 & over	1	556,158	25,793	4.6		104.5
Under $40	83	1,683,233	61,838	3.7		84.1
$40 to $80	54	2,289,229	95,922	4.2		95.5
$80 to $180	25	1,907,054	93,776	4.9		111.4
$180 & over	6	1,458,344	73,336	5.0		113.6

Average 4.4

minimum was 2.7 and the maximum, 3.7, while in 1914, the corresponding percentages were 3.7 and 5.0, respectively. Between these extremes the rates increase directly with the size of the stores.

Judged both by an identical and by a varying number of stores from year to year, purchase discount per cents increase as stores increase in size. This condition holds not only for the combined, but also for the individual years.

B.—*Purchase Discounts for Stores Classified by Size and Size of City in Which Located,* 1919, 1918, and 1914.*

For the three years 1919, 1918, and 1914, combined, the average per cent. of purchase discounts for the 363 store-years in cities with population under 40,000 is 3.3. For the stores in cities with population of 40,000 and over it is 4.1. The difference of 0.8 is

* Population figures are for 1920.

TABLE 50

NUMBER OF STORES REPORTING SPECIFIED PURCHASE DISCOUNTS, CLASSIFIED BY SIZE, 1919, 1918, AND 1914
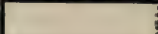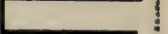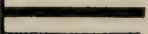
Years	Classified Total Net Sales (in 000's)	Average Purchase Discounts	Number of Stores Reporting Specified Purchase Discounts								
			Total Store-years	Under 1%	1-2 %	2-3 %	3-4 %	4-5 %	5-6 %	6-7 %	7% & over
Total	Total	3.5	765	32	122	190	191	131	62	22	15
	Under $40	3.0	227	19	43	57	50	31	20	5	2
	$40 to $80	3.2	276	7	47	73	80	38	18	6	7
	$80 to $180	3.3	189	6	27	45	46	40	14	9	2
	$180 & over	4.0	73	-	5	15	15	22	10	2	4
1919	Total	3.4	311	9	55	81	97	51	12	2	4
	Under $40	2.6	50	4	16	12	15	2	-	-	1
	$40 to $80	2.9	118	3	22	30	42	17	3	-	1
	$80 to $180	3.0	99	2	14	29	30	18	4	2	-
	$180 & over	3.9	44	-	3	10	10	14	5	-	2
1918	Total	3.3	286	14	52	65	59	44	12	5	5
	Under $40	2.6	94	10	18	29	25	9	1	1	1
	$40 to $80	3.0	104	1	20	36	26	13	5	1	2
	$80 to $180	3.2	65	3	12	16	13	16	1	3	1
	$180 & over	3.8	23	-	2	4	5	6	5	-	1
1914	Total	4.4	168	9	15	24	25	36	38	15	6
	Under $40	3.7	83	5	9	16	10	20	19	4	-
	$40 to $80	4.2	54	3	5	7	12	8	10	5	4
	$80 to $180	4.9	25	1	1	-	3	6	9	4	1
	$180 & over	5.0	6	-	-	1	-	2	-	2	1

seemingly attributable to location. This difference, however, cannot be accepted without certain reservations. In view of the fact that the per cents. increase as the stores increase in size, the proportion of stores of different size in the two city-groups helps to determine the averages. If the proportions were the same in the two groups, the differences could be at-

TABLE 51

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR
163 IDENTICAL STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY,
1919, 1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for 163 Identical Stores of Different Size, is of the Average for All Stores	Per Cent.
		Number of Store-years	Total Purchases	Total Discounts	Per Cent.-Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120 140 160	
Total (Average)	Total (Average)	489	$33,528,940	$1,232,249	3.7		100.0
Total (Average)	Under $40	154	3,135,716	101,922	3.3		89.2
	$40 to $80	165	7,089,952	245,778	3.5		94.6
	$80 to $180	121	9,662,815	341,009	3.5		94.6
	$180 & over	49	13,640,457	543,540	4.0		108.1
Under 40	Total (Average)	363	16,479,073	841,536	3.3		89.2
Under 40	Under $40	137	2,761,409	87,553	3.2		86.5
	$40 to $80	134	5,609,961	188,840	3.4		91.9
	$80 to $180	82	6,516,607	214,586	3.3		89.2
	$180 & over	10	1,591,006	50,557	3.2		86.5
40 and over	Total (Average)	126	17,049,867	690,713	4.1		110.8
40 and over	Under $40	17	374,217	14,369	3.8		102.7
	$40 to $80	31	1,479,991	56,938	3.8		102.7
	$80 to $180	39	3,146,208	126,425	4.0		108.1
	$180 & over	39	12,049,451	492,983	4.1		110.8

Average 3.7

tributed to the influence of location. But this is not true. The element of the size of the store in cities of different size may be partly eliminated by comparing stores found in the same size-group. The details in Tables 51 to 54 make this possible. The per cent. of purchase discounts for the stores with annual sales under $40,000 and located in small cities is 3.2. For those of the same size located in large cities, it is 3.8. Similar differences obtain for each of the other groups of stores. These are shown in actual percentages and in graphic form in Table 51.

In 1919 the average per cent. of purchase discounts for the stores in the small cities was 3.1. For those in the large cities it was 4.0. If the two stores located in the large cities and having sales of less than $40,000 are omitted, the purchase discount rates for every group of stores are higher in the large than in the small cities. The differences are small, but always present. Whether this condition would hold if the stores and cities were more minutely classified is not known. If the stores in the sales-groups shown in Table 52 are treated as identical in size, the location of

TABLE 52

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR 163 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for 163 Stores of Different Size, is of the Average for All Stores Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
		Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases		
Total (Average)	Total (Average)	163	$15,542,320	$554,036	3.6		100.0
	Under $40	25	519,858	15,193	2.9		80.6
	$40 to $80	51	2,116,976	65,099	3.1		86.1
	$80 to $180	59	4,773,235	153,315	3.2		88.9
	$180 & over	28	8,132,251	320,429	3.9		108.3
Under 40	Total (Average)	121	7,257,419	225,203	3.1		86.1
	Under $40	23	478,387	14,278	3.0		83.3
	$40 to $80	45	1,853,260	56,318	3.0		83.3
	$80 to $180	45	3,641,391	114,136	3.1		86.1
	$180 & over	8	1,284,381	41,471	3.2		88.9
40 and over	Total (Average)	42	8,284,901	327,833	4.0		111.1
	Under $40	2	41,471	915	2.2		61.1
	$40 to $80	6	263,716	8,783	3.3		91.7
	$80 to $180	14	1,131,844	39,177	3.5		97.2
	$180 & over	20	6,847,870	278,958	4.1		113.9

Average 3.6

stores seems to be of significance in determining discount rates.

Table 53 shows the purchase discount per cents in 1918 for the 163 stores classified by size and location. The average per cent. for the stores located in the small cities was 3.0; for those located in the large cities it was 3.7. Generally speaking, the rates increase as the stores increase in size, and they are larger for stores in the large cities than for those of the same size in the small cities. The conditions in 1918 and 1919 are much the same.

The same 163 stores shown in

Tables 52 and 53 are classified in Table 54 by size and location for the year 1914. The average per cent. of purchase discounts for the stores in small cities was 4.0. For those in the large cities it was 4.9. For stores of similar size in the two city-groups the per cents are larger in the large cities.

When for a group of identical stores from year to year—the sales alone changing—the purchase discounts are larger for those located in large than in small cities, it may be concluded that the differences in the rates cannot be attributed to the selec-

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tion of the stores. Some other factor must explain the difference. What it is is not easy to explain. Presumably, discounts are taken whenever possible. The fact that the stores in the small cities generally operate at a disadvantage over similar sized stores in large cities, may throw some light on this problem. These advantages, however, are not uniform, nor are they always present. In what respect there are differences for the stores differently located may be determined by consulting the index in Volume VI and the discussion and tables to which references are made.

C.—Summary.

(1). The average per cent. of purchase discounts for the three years combined for a group of stores varying in number from year to year is 3.5. For 163 identical stores for the combined years it is 3.7.

(2). The average per cents of purchase discounts for the two groups of stores decreased between 1914 and 1918, and increased between 1918 and 1919, the rate for 1914 in both instances being considerably

TABLE 53
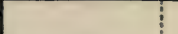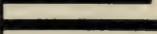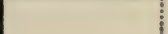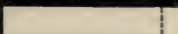
TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR 163 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1918

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for 165 Stores of Different Size, is of the Average for All Stores	Per Cent.
		Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120	
Total (Average)	Total (Average)	163	$10,882,936	$362,783	3.3		100.0
	Under $40	47	955,864	25,989	2.7		81.8
	$40 to $80	62	2,762,446	86,352	3.1		93.9
	$80 to $180	39	3,114,764	100,667	3.2		97.0
	$180 & over	15	4,049,862	149,775	3.7		112.1
Under 40	Total (Average)	121	5,442,345	163,947	3.0		90.9
	Under $40	44	907,796	24,388	2.7		81.8
	$40 to $80	49	2,134,267	65,807	3.1		93.9
	$80 to $180	26	2,093,657	64,666	3.1		93.9
	$180 & over	2	306,625	9,086	3.0		90.9
40 and over	Total (Average)	42	5,440,591	198,836	3.7		112.1
	Under $40	3	48,068	1,601	3.3		100.0
	$40 to $80	13	628,179	20,545	3.3		100.0
	$80 to $180	13	1,021,107	36,001	3.5		106.1
	$180 & over	13	3,743,237	140,689	3.8		115.2

Average 3.3

TABLE 54

TOTAL PURCHASES, AMOUNT AND PER CENT. OF PURCHASE DISCOUNTS FOR 163 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1914

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Purchase Discounts				Ratio Which Purchase Discount for 163 Stores of Different Size, is of the Average for All Stores	Per Cent.
		Number	Total Purchases	Total Discounts	Per Cent. Discounts to Purchases	Per Cent. 0 20 40 60 80 100 120 140 160	
Total (Average)	Total (Average)	163	$7,103,684	$315,430	4.4		100.0
Total (Average)	Under $40	82	1,659,994	60,740	3.7		84.1
	$40 to $80	52	2,210,530	94,327	4.3		97.7
	$80 to $180	23	1,774,816	87,027	4.9		111.4
	$180 & over	6	1,458,344	73,336	5.0		113.6
Under 40	Total (Average)	121	3,779,309	151,386	4.0		90.9
Under 40	Under $40	70	1,375,316	48,887	3.6		81.3
	$40 to $80	40	1,622,434	66,717	4.1		93.2
	$80 to $180	11	781,559	35,782	4.6		104.5
	$180 & over	-	-	-	-		-
40 and over	Total (Average)	42	3,324,375	164,044	4.9		111.4
40 and over	Under $40	12	284,678	11,853	4.2		95.5
	$40 to $80	12	588,096	27,610	4.7		106.8
	$80 to $180	12	993,257	51,245	5.2		118.2
	$180 & over	6	1,458,344	73,336	5.0		113.6

Average 4.4

higher than for either of the other years.

(3). The average per cents of purchase discounts increase as stores increase in size, the difference between those for stores with sales under $40,000 and those with sales of $180,000 and over, for the combined years, being 1.0 and 0.7 per cent., respectively, for the two groups of stores.

(4). The average per cents of purchase discounts are larger for stores in large cities than for those of approximately the same size in small cities.

THE discussion of turnover rates applies first, to stock, and second, to capital invested in merchandise.

1.—ANNUAL RATES OF STOCK TURNOVER, 1919.

In the questionnaire which was used by the Bureau in securing information from clothiers, provision was made for merchants to report the amounts of their inventories at the close of the calendar or fiscal years 1919, 1918, and 1914. To determine the average stock carried throughout the year, merchants were directed to add together the amounts of their stock on hand at the close of each month and divide by 12. Unfortunately, however, this rule was not generally followed, and in order to compute stock turnover, it was necessary to use the average inventories at the close of the years.

The questionnaire did not call for the amounts of inventories at the close of 1913 and 1917, and it is impossible to compute annual stock turnover rates for 1914 or 1918. While the analysis at various places throughout these volumes has shown that 1919 was an exceptional year, comparative figures on turnover are of such significance to the clothier that data on this topic are presented.

A.—*Method of Computing Stock Turnover.*

The annual stock turnover rates are computed by dividing the total cost of merchandise sold during the year by the average of the inventories at the close of the years 1918 and 1919. ''Cost of merchandise sold'' is determined by adding to the 1918 inventory the purchases, less returns to manufacturers, and freight and cartage in 1919, and deducting therefrom the 1919 inventory.

Inventories were reported as having been taken in various ways: at cost with discounts deducted; at cost with discounts not deducted; at depreciated value; and at appreciated value. Inasmuch, however, as the differences in the stock turnover rates are small, when the methods of taking inventories are treated separately, no distinction is made for them in most of the data. It would have been ideal to have secured monthly inventories upon a uniform basis. But the Bureau had only a limited sanction in its request for information. Moreover, other data than inventories were desired, and it seemed impracticable to ask for monthly figures. It was hoped that the data supplied on average stock carried throughout the year would be sufficiently detailed so that they might be used for computing stock turnover. This hope, however, proved to be vain.

It is probably true that the inventories taken at the close of the years 1918 and 1919 are too low,* and, therefore, that the turnover rates are too high. How much too high it is impossible to say. If the figures at the close of the years are always too low, the errors, of course, are biased and not self-corrective. Whatever may be the errors, if any, they do not seriously lessen the value of the rates for comparative purposes. In this study, the emphasis is on the relative rather than on the actual rates.

Annual stock turnover rates are averages and not necessarily representative of any particular store. What they show are the relative and not the absolute positions of stores in this respect. If there are errors, they are essentially constant. The rates for the different groups of stores are relatively correct. If it is thought that the inventories are too low, the turnover rates for any group of stores may be corrected by merchants applying to the rates given the ratios of their inventories taken at the close of the year to the inventories taken on a monthly, quarterly, or any other basis which seems to them suitable. To illustrate: If the average inventories at the close of the years 1918 and 1919 in a particular case are too low by 20 per cent. and the average annual stock turnover, when based

* The average inventory per store for a group of identical stores in 1919, 1918, and 1914 was respectively $41,441, $36,803, and $24,310. In terms of $100 of total net sales, these inventories stood at $32.72, $41.44, and $43.70 for the years, respectively.

upon average yearly inventory is 2.0, then the approximate turnover rate, when allowance is made for the error, is 1.6. If the errors in the inventories are *constant*, the *relations* between the rates for several stores are not seriously disturbed. From many points of view the *relative* are more significant than the *actual* turnover rates.

In Table 55, 314 stores are classified according to the methods by which inventories were taken in 1919. For each of the methods, the average annual stock turnover rates and the number of stores which reported certain classified annual rates are given. The average rate for all of the stores is 2.1. For those which took their inventories at cost with discounts deducted, it is 2.2. For those which took them at cost but did not deduct their discounts, it is 2.3. For those using depreciated value, it is 2.3 and for those using appreciated value, it is 2.0. Approximately two-thirds of the stores took their inventories at cost, discounts not deducted. The average annual rate, however, for these stores differs by not more than 0.3 of a turn from the rate for stores using appreciated value, and by not more than 0.2 of a turn from the average rate for all methods.

When all the methods are combined, the most common rate is 1.5 to 2.0. Thirty-five per cent. of the stores had rates between 2.0 and 3.0, and 46.8 per cent. between 1.0 and 2.0. Only 13.7 per cent. had annual rates of 3.0 or more, and only 4.5 per cent.

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TABLE 55

COST OF MERCHANDISE SOLD, AVERAGE INVENTORY 1918 AND 1919, AND
ANNUAL STOCK TURNOVER FOR STORES CLASSIFIED BY METHOD
OF TAKING INVENTORY, 1919

Methods of Taking Inventory	Cost of Merchandise Sold	Average Inventory 1918 & 1919	Annual Stock Turnover	Number of Stores Having Classified Annual Rates of Stock Turnover										
				Total	Under 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 & over
All Methods	$25,046,060	$11,759,317	2.1	314	14	56	91	66	44	22	7	3	5	6
At Cost - Discounts Deducted	5,224,873	2,404,857	2.2	53	2	5	22	13	2	6	-	-	1	2
At Cost - Discounts not Deducted	16,060,742	7,747,255	2.3	217	11	43	57	48	32	12	5	3	4	2
At Depreciated Value	3,358,599	1,409,914	2.3	36	-	7	10	4	9	3	1	-	-	2
At Appreciated Value	401,846	197,291	2.0	8	1	1	2	1	1	1	1	-	-	1

less than 1.0. The proportion of stores reporting different rates does not vary greatly when the stores are classified by the method of taking inventories. Table 55 makes this clear.

B.—Annual Rates of Stock Turnover for Stores Classified by Size and by Size of City in Which Located,* 1919.

In Table 56, the 314 stores for which the annual stock turnover rates could be determined for 1919 are classified according to size. The average annual rate is 2.1. The minimum is 1.2 and the maximum, when the stores are classified into small groups, 2.9. When they are classified into wider groups, as in the lower part of Table 56, the annual rates range from 1.4 to 2.7. The rates increase as stores increase in size. If the single group of stores with sales of $140,000 to
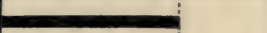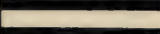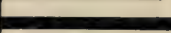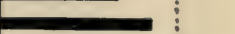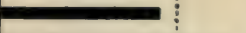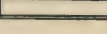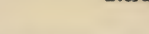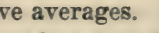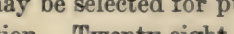
* Population figures are for 1920.

$180,000 is excepted, the increases from store-group to store-group are strikingly uniform. The graphic part of the table clearly illustrates this fact. When the stores are classified in wide groups, the amounts increase from group to group as stores increase in size. To this general principle there are no exceptions.

The annual rates of stock turnover are interesting in the light of the relation of purchases and inventories to sales, and of inventories to purchases, in stores of different size. It will be recalled from the discussion and the tables on pages 405 to 413 that purchases per $100 of total net sales decrease as stores increase in size. Moreover, as has been pointed out, inventories in terms of sales, while relatively low in 1919 as compared to 1914 and 1918, decrease each year as stores increase in size. This condition holds for stores classified not only by size, but also by size and location. More-

TABLE 56

COST OF MERCHANDISE SOLD, AVERAGE INVENTORY 1918 AND 1919, AND
ANNUAL STOCK TURNOVER FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Number of Stores	Cost of Merchandise Sold	Average Inventory 1918 & 1919	Annual Stock Turnover	Ratio Which Turnover for Stores of Different Size, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
Total (Average)	314	$25,046,060	$11,759,317	2.1		100.0
Under $20	3	42,857	35,103	1.2		57.1
$20 to $40	43	898,715	619,464	1.5		71.4
$40 to $60	77	2,581,521	1,520,670	1.7		81.0
$60 to $80	45	2,188,462	1,177,526	1.9		90.5
$80 to $100	54	2,056,526	1,069,021	1.9		90.5
$100 to $140	45	3,865,474	1,876,410	2.0		95.2
$140 to $180	22	2,340,988	1,237,707	1.9		90.5
$180 to $220	12	1,498,511	643,287	2.3		109.5
$220 to $300	12	2,249,879	861,955	2.6		123.8
$300 to $500	14	3,332,396	1,228,705	2.7		128.6
$500 & over	7	4,190,731	1,469,469	2.9		138.1
Under $40	46	941,572	654,567	1.4		66.7
$40 to $80	122	4,769,983	2,698,196	1.8		85.7
$80 to $180	101	8,062,988	4,183,138	1.9		90.5
$180 & over	45	11,271,517	4,223,416	2.7		128.6

Average 2.1

over, as is shown in Tables 36 to 39, the average inventories per $100 of purchases decrease as stores increase in size. Stock turnover rates are functions of these conditions.

Table 57 shows the number of stores of different size having specified annual rates of stock turnover in 1919. This table is inserted to show how nearly the average rates for the several groups of stores reflect the actual conditions. It is unnecessary to comment upon the distribution of the stores further than to say that most of the stores have rates at or near the respective averages. A single class of stores may be selected for purposes of illustration. Twenty-eight or 62.2 per cent. of the 45 stores, with annual sales of $100,000 to $140,000 and an average annual stock turnover rate of 2.0, are concentrated within the limits of 1.5 to 2.5. Similar concentration obtains for the stores in the other sales-groups.

In Table 58, the 314 stores for which it is possible to determine annual stock turnover rates are classified by size and location. The average for the 230 stores located in

TABLE 57

NUMBER OF STORES HAVING CLASSIFIED ANNUAL RATES OF STOCK TURNOVER, CLASSIFIED BY SIZE, 1919
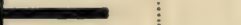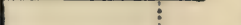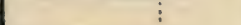
Classified Total Net Sales (in 000's)	Average Annual Stock Turnover	Number of Stores Having Classified Annual Rates of Stock Turnover										
		Total	Under 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 & over
Total	2.1	314	14	58	91	66	44	22	7	3	5	6
Under $20	1.2	3	1	-	1	1	-	-	-	-	-	-
$20 to $40	1.5	43	5	13	9	8	5	2	-	-	-	1
$40 to $60	1.7	77	2	18	34	8	9	4	1	-	1	-
$60 to $80	1.9	45	3	11	8	12	3	4	2	-	1	1
$80 to $100	1.9	34	2	4	10	8	6	1	1	1	1	-
$100 to $140	2.0	45	1	5	14	14	7	2	-	-	1	1
$140 to $180	1.9	22	-	4	9	3	3	1	1	1	-	-
$180 to $220	2.3	12	-	-	4	3	3	-	1	-	-	1
$220 to $300	2.6	12	-	1	1	3	2	2	1	1	1	-
$300 to $500	2.7	14	-	-	1	4	3	5	-	-	-	1
$500 & over	2.9	7	-	-	-	2	3	1	-	-	-	1
Under $40	1.4	46	6	13	10	9	5	2	-	-	-	1
$40 to $80	1.8	122	5	29	42	20	12	8	3	-	2	1
$80 to $180	1.9	101	3	13	33	25	16	4	2	2	2	1
$180 & over	2.7	45	-	1	6	12	11	8	2	1	1	3

cities with population under 40,000 is 1.9. For the 84 stores located in cities with population of 40,000 and over, it is 2.5. Within each of these city-groups, the rates increase as the stores increase in size. The rates for the stores as totals in the city-groups, therefore, are not only affected by the turnover rates themselves, but also by the proportions in which stores of different size enter into the total. A more significant comparison can be made of stores of the same size, but of different location. An inspection of Table 58 shows that for each store-group, except for the one with stores having sales under $40,000, the average annual stock turnover rate is greater for stores in large than in small cities. It is true that these differences are small, but equally true that stores, on the whole, located in

TABLE 58

COST OF MERCHANDISE SOLD, AVERAGE INVENTORY 1918 AND 1919, AND
ANNUAL STOCK TURNOVER FOR STORES CLASSIFIED BY
SIZE AND BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Number of Stores	Cost of Merchandise Sold	Average Inventory 1918 & 1919	Annual Stock Turnover	Ratio Which Turnover for Stores of Different Size in Cities of Different Size, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 140	Per Cent.
Total (Average)	Total (Average)	314	$25,046,060	$11,759,317	2.1		100.0
Total (Average)	Under $40	46	941,572	654,567	1.4		66.7
	$40 to $80	122	4,769,983	2,698,196	1.8		85.7
	$80 to $180	101	8,062,988	4,183,138	1.9		90.5
	$180 & over	45	11,271,517	4,223,416	2.7		128.6
Under 40	Total (Average)	230	13,040,787	6,972,242	1.9		90.5
	Under $40	43	889,745	613,539	1.5		71.4
	$40 to $80	106	4,072,465	2,369,956	1.7		81.0
	$80 to $180	68	5,387,137	2,891,429	1.9		90.5
	$180 & over	13	2,691,440	1,097,338	2.5		119.0
40 and over	Total (Average)	84	12,005,273	4,787,075	2.5		119.0
	Under $40	3	51,827	41,028	1.3		61.9
	$40 to $80	16	697,518	328,260	2.1		100.0
	$80 to $180	33	2,675,851	1,291,709	2.1		100.0
	$180 & over	32	8,580,077	3,126,078	2.7		128.6

Average 2.1

the larger cities have an advantage in the rapidity with which they turn their stock. The graphic part of the table clearly reflects the differences for the stores so classified.

Table 59 shows the number of stores of different size and location having classified turnover rates. The purpose of this table is to indicate the degree to which the averages for the respective groups are representative of the detail. For purposes of illustration, the meaning of this table can be shown by comparing in the two city-groups the number of stores with annual sales of $80,000 to $180,000, and with average turnover rates of 1.9 and 2.1. The most common turnover rate for the 68 stores in the small cities is between 1.5 and 2.0, although 9 stores have rates between 1.0 and 1.5, and 16 stores have rates between 2.0 and 2.5. Fifty-two stores or 76.5 per cent. of the total have rates between 1.0 and 2.5.

On the other hand, the most common rate for the 33 stores falling in the sales-group, $80,000 to $180,000, and located in the large cities, is 2.5 to 3.0, although 9 stores have rates

TABLE 59

NUMBER OF STORES HAVING SPECIFIED ANNUAL RATES OF STOCK TURNOVER, CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919
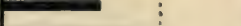
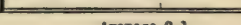| Size of City (in 000's)	Classified Total Net Sales (in 000's)	Average Annual Stock Turnover	Number of Stores Having Specified Annual Rates of Stock Turnover										
			Total	Under 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 & over
Total	Total	2.1	314	14	56	91	56	44	22	7	3	5	6
	Under $40	1.4	46	6	13	10	9	5	2	-	-	-	1
	$40 to $80	1.8	122	5	29	42	20	12	8	3	-	2	1
	$80 to $180	1.9	101	3	13	33	25	16	4	2	2	2	1
	$180 & over	2.7	45	-	1	6	12	11	8	2	1	1	3
Under 40	Total	1.9	230	11	49	83	40	24	11	4	3	2	3
	Under $40	1.5	43	4	13	10	9	4	2	-	-	-	1
	$40 to $80	1.7	106	4	27	40	14	11	5	3	-	1	1
	$80 to $180	1.9	68	3	9	27	16	6	3	1	2	-	1
	$180 & over	2.5	13	-	-	6	1	3	1	-	1	1	-
40 and over	Total	2.5	84	3	7	8	26	20	11	3	-	3	3
	Under $40	1.3	3	2	-	-	-	1	-	-	-	-	-
	$40 to $80	2.1	16	1	2	2	6	1	3	-	-	1	-
	$80 to $180	2.1	33	-	4	6	9	10	1	1	-	2	-
	$180 & over	2.7	32	-	1	-	11	8	7	2	-	-	3

between 2.0 and 2.5. In this group, 57.6 per cent. of the stores have rates between 1.0 and 2.5, as contrasted with the 76.5 per cent. for the corresponding group of stores in small cities.

C.—*Annual Rates of Stock Turnover for Specified Departments, 1919.*

The size of stores and their location are only two of the factors which help to explain the rapidity with which stock is turned. It is impossible in a study of this type, when stores are combined into groups, to take account of all of the conditions which explain different turnover rates. Certain of these, however, will be brought out, if departments are treated separately.

There are undoubtedly wide differences in the ease with which merchandise sold by clothiers is turned. Moreover, the proportions which different lines constitute of the total stock carried vary. For instance, for the stores in which it is possible to measure, for 1919, the departmental turnover rates for men's and young men's clothing, the proportions which

the cost of these types of merchandise constitutes of the total cost of all merchandise sold vary from $34.80 to $50.31 per $100. In departments selling men's hats and caps the corresponding range is $7.17 to $8.04. For men's furnishings it is $15.96 to $34.59, and for boys' and children's clothing $5.56 to $10.28. Averages for stores as a whole are of little use in measuring either of these factors. If all of the stores had been departmentized and had furnished both their inventories and purchases in detail, it would have been possible to have determined turnover rates for each of the 13 departments for which the questionnaire provided. But they were not all departmentized, and some that were so organized did not report the necessary data. It is, however, possible to analyze the turnover rate for four major departments.

Whatever errors characterize the inventories for the entire stores, due to the fact that they are taken annually rather than at more frequent intervals, undoubtedly become more serious when departments are studied separately than when they are combined. Seasonal conditions are different for different lines of goods. When departments are combined, exceptional conditions tend to be smoothed out, the low inventories in some departments compensating for high inventories in others. When individual lines of goods are treated separately, the inventories taken at the close of the year may not be representative of the average stock carried.

While the Bureau in presenting department stock turnover rates is conscious of the fact that they are less satisfactory than those for stores as a whole, at the same time it is of the opinion that the publication of the rates is justified. If they are not absolutely exact measures of, they are at least close approximations to the rates which obtain in the various departments considered.

The method of presenting the data follows closely that used for entire stores, distinction being made for
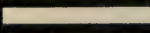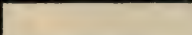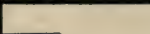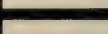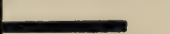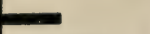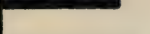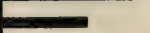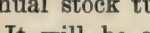
TABLE 60

COST OF MERCHANDISE SOLD, AVERAGE INVENTORY 1918 AND 1919, AND
ANNUAL STOCK TURNOVER FOR SPECIFIED DEPARTMENTS, 1919

Departments	Number of Stores	Cost of Merchandise Sold	Average Inventory 1918 & 1919	Annual Stock Turnover				
				Actual	Graphic			
					0	1	2	3
Men's and Young Men's Clothing	96	$5,640,148	$2,158,591	2.6				
Men's Hats and Caps	55	566,357	232,977	2.4				
Men's Furnishings	35	1,106,353	593,837	1.9				
Boys' and Children's Clothing	59	608,948	330,727	1.8				

TABLE 61

COST OF MERCHANDISE SOLD, AVERAGE INVENTORY 1918 AND 1919, AND
ANNUAL STOCK TURNOVER FOR SPECIFIED DEPARTMENTS, FOR
STORES CLASSIFIED BY SIZE, 1919

Departments	Classified Total Net Sales (in 000's)	Number of Stores Reporting	Cost of Merchandise Sold	Average Inventory 1918 & 1919	Annual Stock Turnover	
					Actual	Graphic
Men's and Young Men's Clothing	Total (Average)	96	$5,640,148	$2,158,591	2.6	
	Under $40	7	48,462	28,443	1.7	
	$40 to $80	25	404,176	214,227	1.9	
	$80 to $180	38	1,506,800	654,335	2.3	
	$180 & over	26	3,680,710	1,261,586	2.9	
Men's Hats and Caps	Total (Average)	55	566,357	232,977	2.4	
	Under $40	2	2,794	3,008	0.9	
	$40 to $80	12	31,842	24,192	1.3	
	$80 to $180	19	131,119	52,186	2.5	
	$180 & over	22	400,602	153,591	2.6	
Men's Furnishings	Total (Average)	35	1,106,353	593,837	1.9	
	Under $40	1	3,330	3,750	0.9	
	$40 to $80	11	128,844	80,344	1.6	
	$80 to $180	12	339,675	175,528	1.9	
	$180 & over	11	634,504	334,215	1.9	
Boys' and Children's Clothing	Total (Average)	59	608,948	330,727	1.8	
	Under $40	5	5,575	2,797	2.0	
	$40 to $80	14	27,169	20,686	1.3	
	$80 to $180	26	134,471	88,842	1.5	
	$180 & over	14	441,733	228,402	1.9	

stores of different size, but not of different location. To have done the latter would have reduced the number of stores for each city-group to such a degree that the results would have been inconclusive.

Table 60 shows in summary for four of the major departments, the number of stores, the cost of merchandise sold, the average inventories for 1918 and 19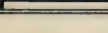19, and the annual stock turnover rates for 1919. It will be recalled that the 314 stores included in the various tables relating to stores as a whole turned their stock on the average 2.1 times during the year. The number of turns for men's and young men's clothing is 2.6; for men's hats and caps, 2.4; for men's furnishings, 1.9; and for boys' and children's

TABLE 62

NUMBER OF STORES HAVING SPECIFIED ANNUAL RATES OF STOCK TURNOVER
FOR SPECIFIED DEPARTMENTS, CLASSIFIED BY SIZE, 1919

Departments	Classified Total Net Sales (in 000's)	Average Annual Departmental Stock Turnover	Number of Stores Having Specified Rates of Departmental Stock Turnover										
			Total	Under 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 & over
Men's and Young Men's Clothing	Total	2.6	96	2	12	30	20	12	12	5	3	3	7
	Under $40	1.7	7	1	1	3	1	-	-	-	-	-	1
	$40 to $80	1.9	25	1	6	7	4	3	2	2	-	-	-
	$80 to $180	2.3	38	-	3	8	11	5	6	2	-	2	1
	$180 & over	2.9	26	-	2	2	4	4	4	1	3	1	5
Men's Hats and Caps	Total	2.4	55	3	6	10	14	6	9	2	1	2	2
	Under $40	0.9	2	1	1	-	-	-	-	-	-	-	-
	$40 to $80	1.3	12	2	2	3	3	2	-	-	-	-	-
	$80 to $180	2.5	19	-	1	4	6	3	2	1	1	-	1
	$180 & over	2.6	22	-	2	3	5	1	7	1	-	2	1
Boys' and Children's Clothing	Total	1.9	35	4	6	12	5	6	1	-	1	-	-
	Under $40	0.9	1	1	-	-	-	-	-	-	-	-	-
	$40 to $80	1.6	11	2	3	2	1	3	-	-	-	-	-
	$80 to $180	1.9	12	-	1	5	4	2	-	-	-	-	-
	$180 & over	1.9	11	1	2	5	-	1	1	-	1	-	-
Men's Furnishings	Total	1.8	59	6	15	22	7	4	2	1	-	-	1
	Under $40	2.0	5	-	-	3	1	-	1	-	-	-	-
	$40 to $80	1.3	14	2	8	2	1	1	-	-	-	-	-
	$80 to $180	1.5	26	4	6	10	2	2	-	1	-	-	1
	$180 & over	1.9	14	-	2	7	3	1	1	-	-	-	-

clothing, 1.8. The rates for men's and young men's clothing and men's hats and caps exceed, while the rates for the other departments are lower than the average. The graphic part of Table 60 shows at a glance the relation of the rates in the different departments.

In Table 61 distinction is made for each of the departments in stores of different size. It will be remembered that the rates for the stores as a whole increase as the stores increase in size. This does not hold, however, in every instance for the departments treated separately, although generally speaking it is true. For men's and young men's clothing the average is 2.6. The minimum, 1.7, applies to stores with annual sales under $40,000, while the maximum, 2.9, corresponds to the stores with sales of $180,000 and over.

A somewhat similar change characterizes departments handling men's hats and caps in stores of different size. The range for this group of departments is from a minimum of 0.9 to a maximum of 2.6; the extremes corresponding to the stores having the smallest and the largest annual sales. A somewhat smaller difference in the range of turnover rates characterizes the departments handling men's furnishings in stores of different size. If the single store having annual sales under $40,000 is eliminated, the rates in these departments do not differ markedly for stores of different size. In boys' and children's clothing departments there is no evidence that the rates increase as the stores increase in size. Whether this would be true if the number of departments included were enlarged, it is impossible to say. How nearly, however, the averages for these departments are typical of the conditions obtaining in the different stores is shown in Table 61.

Table 62 is supplied in order to show how nearly the average rates for the different departments characterize the turnover rates in detail. Averages, as has been pointed out in a variety of places in these studies, are treacherous for purposes of generalization when the number of instances upon which they are based is few, or when the conditions which they describe are widely different. Realizing this fact, it is worth while, in view of the small number of stores for which the departmental turnover figures could be determined, to indicate the number of stores having classified rates.

D.—*Summary.*

(1). The average rates of stock turnover for stores classified by the method by which inventories are taken range from a minimum of 2.0 to a maximum of 2.3. The average for all methods is 2.1.

(2). Average rates of stock turnover increase as stores increase in size, the lowest average rate being found in the smallest, and the highest in the largest stores. The rates, when the stores are classified into narrow sales-groups, range from 1.2 to 2.9.

(3). Average rates of stock turnover are higher on the whole in stores in large than in stores of similar size in small cities.

(4). For four major departments for which it was possible to determine departmental turnover, the rates were highest in those handling men's and young men's clothing, and lowest in those handling boys' and children's clothing. The average for the former is 2.6, and for the latter, 1.8.

(5). In separate departments, stock turnover rates, on the whole, increase as the stores increase in size, but to this

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rule, the rates in departments handling boys' and children's clothing are seeming exceptions.

2.—ANNUAL RATES OF CAPITAL TURN-OVER IN CLOTHING STORES, 1919, 1918, AND 1914.

A.—*Method of Computing Capital Turnover.*

Capital turnover is computed by dividing the total net sales at selling price during each year by the average merchandise on hand at cost price for the corresponding year. Capital turnover should be distinguished from stock turnover, the latter being computed by dividing the total cost of merchandise sold during a year by the average amount of the inventories at cost for the preceding year and the year in question.

B.—*Annual Rates of Capital Turnover, 1919, 1918, and 1914.*

Based upon the experience of 318 store-years for 1919, 1918, and 1914, combined, total net sales of $34,557,-594, and average stock of $11,998,419, the average annual capital turnover rate is 2.9. In 1919, for 138 stores, it was 3.4; in 1918, for 117 stores, it was 2.5; and in 1914, for 63 stores, it was 2.3. The average for 1919 is 17.2 per cent. higher than the average for the three years. In 1918 and 1914, respectively, the amounts are 13.8 and 20.7 per cent. less than the average for the combined years. These rates refer to stores differing in number, size, and location for each of the years, but for 62 identical stores throughout the various years, the ratios are only negligibly different.

The average rates for each of the years for a varying number of stores are shown in Table 63.
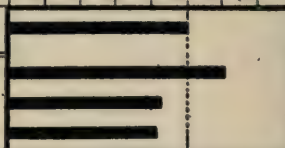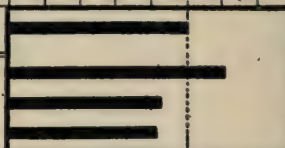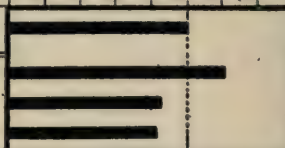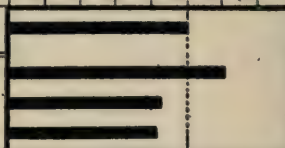
TABLE 63

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER, 1919, 1918, AND 1914

| Years | Stores Reporting on Average Stock | | | | Ratio Which Capital Turn-over for Each Year is of the Average for All Years | Per Cent. |
	Number of Store-years	Total Net Sales	Average Stock	Capital Turnover	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	318	$34,557,594	$11,998,419	2.9		100.0
1919	138	18,909,915	5,571,436	3.4		117.2
1918	117	11,751,906	4,754,140	2.5		86.2
1914	63	3,895,773	1,672,843	2.3		79.3

Average 2.9

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TABLE 64

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR 62 IDENTICAL
STORES, 1919, 1918, AND 1914

Years	Stores Reporting on Average Stock				Ratio Which Capital Turnover for 62 Identical Stores for Each Year, is of Turnover for All Years	Per Cent.
	Number of Store-years	Total Net Sales	Average Stock	Capital Turnover	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	186	$18,970,968	$6,792,068	2.8		100.0
1919	62	9,120,198	2,657,857	3.4		121.4
1918	62	6,025,680	2,489,078	2.4		85.7
1914	62	3,827,090	1,645,133	2.3		82.1

Average 2.8

In Table 64 the annual capital turnover rates are shown for 62 stores for each of the years 1919, 1918, and 1914. For the combined years the average is 2.8. In 1919 it was 3.4; in 1918, 2.4; and in 1914, 2.3. By comparing Tables 63 and 64 it is seen that the rates for the two groups of stores for 1919 and 1914 are identical. For 1918 and for the combined years there is a difference between the rates for the two groups of only 0.1. Based upon both groups of stores the rates slightly increased between 1914 and 1918. Between 1918 and 1919 there was a distinct gain, the difference in the rates being approximately one turn.

(1)—ANNUAL RATES OF CAPITAL TURNOVER FOR STORES CLASSIFIED BY SIZE, 1919, 1918, AND 1914.

In Tables 65 to 68, inclusive, the rates of capital turnover are shown for stores varying in number from year to year and classified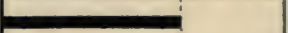 according to size. In each year the rates increase as the stores increase in size, the amount of the increase in 1919 closely approximating that shown for stock turnover in Table 56.
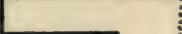
For the combined years, when stores are classified into narrow groups, the minimum rate is 1.6 and the maximum, 4.1; the extremes corresponding respectively to the smallest and the largest stores. When the stores are classified into wider groups as in the lower part of the table, the rates range from 1.9 to 3.7, the difference in the average rates, however, for stores with sales between $40,000 and $80,000, and between $80,000 and $180,000, being small. When the stores are classified in narrow salesgroups there are slight exceptions to the rule that the amounts increase as the stores increase in size, but these are eliminated when the groups are widened.

In 1919, as shown in Table 66, the average capital turnover rate for the 138 stores was 3.4. The minimum rate was 2.0 and the maximum, 4.7; the

TABLE 65

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES
CLASSIFIED BY SIZE, 1919, 1918, AND 1914, COMBINED

Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				Ratio Which Capital Turnover for Stores of Different Size, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 140 160	Per Cent.
	Number of Store-years	Total Net Sales	Average Stock	Capital Turnover		
Total (Average)	318	$34,557,594	$11,998,419	2.9		100.0
Under $20	16	258,283	165,630	1.6		55.2
$20 to $40	81	2,374,901	1,254,274	1.9		65.5
$40 to $60	61	2,966,749	1,245,106	2.4		82.8
$60 to $80	44	3,051,224	1,261,901	2.4		82.8
$80 to $100	27	2,353,094	942,762	2.5		86.2
$100 to $140	34	4,056,735	1,671,585	2.4		82.8
$140 to $180	14	2,180,609	826,565	2.6		89.7
$180 to $220	13	2,565,847	747,415	3.4		117.2
$220 to $300	8	2,029,445	622,150	3.3		113.8
$300 to $500	13	4,889,320	1,361,234	3.6		124.1
$500 & over	8	7,831,387	1,699,797	4.1		141.4
Under $40	97	2,633,184	1,419,904	1.9		65.5
$40 to $80	105	6,017,973	2,507,007	2.4		82.8
$80 to $180	74	8,590,438	3,440,912	2.5		86.2
$180 & over	42	17,315,999	4,630,596	3.7		127.6

Average 2.9
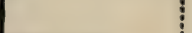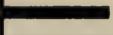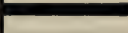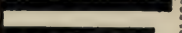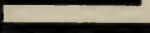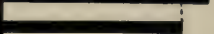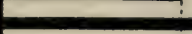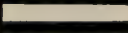
minimum rate corresponding to the smallest stores, and the maximum to those having annual sales of $300,000 to $500,000. From group to group the rates increase as the stores increase in size, although the tendency is not uniform and there are exceptions for some of the groups. When the stores are classified into wider groups, however, the rates increase as the stores increase in size. In 1919, the direction of change is the same as that for the combined years.

In 1918 the average capital turnover rate was 2.5. When the stores are classified into narrow groups the minimum is 1.5 and the maximum, 3.3. Between these limits the amounts generally increase as the stores increase in size, but to this rule there are certain exceptions. When the stores are classified into wide groups the average rate for those having sales from $40,000 to $80,000 exceeds by a small difference the rate for those with sales from $80,000 to $180,000. When the complete range of size, however, is considered, the amounts increase in this year as in 1919 and in the combined years.

TABLE 66

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				Ratio Which Capital Turnover for Stores of Different Size, is of the Average Turnover	Per Cent.
	Number	Total Net Sales	Average Stock	Capital Turnover	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	138	$18,909,915	$5,571,436	3.4		100.0
Under $20	-	-	-	-		-
$20 to $40	22	651,806	321,795	2.0		58.8
$40 to $60	32	1,515,063	615,169	2.5		73.5
$60 to $80	24	1,673,855	664,549	2.5		73.5
$80 to $100	11	1,007,563	311,989	3.2		94.1
$100 to $140	15	1,848,422	637,550	2.9		85.3
$140 to $180	10	1,555,152	593,976	2.6		76.5
$180 to $220	7	1,387,931	352,476	3.9		114.7
$220 to $300	4	1,019,384	296,078	3.4		100.0
$300 to $500	7	2,673,386	563,830	4.7		138.2
$500 & over	6	5,577,353	1,214,024	4.6		135.3
Under $40	22	651,806	321,795	2.0		58.8
$40 to $80	56	3,188,918	1,279,718	2.5		73.5
$80 to $180	36	4,411,137	1,543,515	2.9		85.3
$180 & over	24	10,658,054	2,426,408	4.4		129.4

Average 3.4

In 1914 the average capital turnover rate was 2.3. The minimum was 1.6 and the maximum, 2.9. When the stores are classified into wide groups, the rates range from 1.9 to 2.6, the extremes corresponding to the smallest and to the largest stores, respectively.
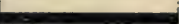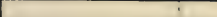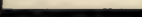
The stores reporting for 1919 are classified in Table 69 by size, and for each group the number of stores which had specified rates of capital turnover is given. The purpose of this table is to indicate the degree to which the averages shown in Table 66 characterize the different stores.

For all the stores combined the most common rate of capital turnover is between 2.5 and 3.0, although there are practically as many stores having rates between 2.0 and 2.5. The range of rates is wider when the stores are combined than when they are classified by groups. In other words, the general average less satisfactorily indicates the common or modal tendency than do the averages for the respective classes of stores. It seems

TABLE 67

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY SIZE, 1918

Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				Ratio Which Capital Turnover for Stores of Different Size, is of the Average Turnover Per Cent.	Per Cent.
	Number	Total Net Sales	Average Stock	Capital Turnover	0 20 40 60 80 100 120 140	
Total (Average)	117	$11,751,906	$4,754,140	2.5		100.0
Under $20	5	92,491	61,226	1.5		60.0
$20 to $40	36	1,063,311	610,409	1.7		68.0
$40 to $60	22	1,102,590	479,833	2.3		92.0
$60 to $80	12	826,914	351,727	2.4		96.0
$80 to $100	10	894,325	441,625	2.0		80.0
$100 to $140	15	1,743,951	855,311	2.0		80.0
$140 to $180	2	307,086	108,440	2.8		112.0
$180 to $220	3	597,159	194,710	3.1		124.0
$220 to $300	4	1,010,061	326,072	3.1		124.0
$300 to $500	5	1,859,984	639,014	2.9		116.0
$500 & over	2	2,254,034	685,773	3.3		132.0
Under $40	42	1,155,802	671,635	1.7		68.0
$40 to $80	34	1,929,504	831,560	2.3		92.0
$80 to $180	27	2,945,362	1,405,376	2.1		84.0
$180 & over	14	5,721,238	1,845,569	3.1		124.0

Average 2.5

unnecessary to include in this study similar details for the other years. This table may be taken to illustrate the range of rates for stores of different size.
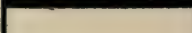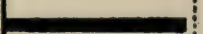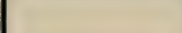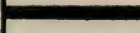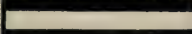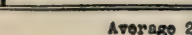
In Tables 70 to 73 average turnover rates for identical stores from year to year are given. The average capital turnover rate for 62 stores for the combined years, 1919, 1918, and 1914, is 2.8. When the stores are classified by size, the minimum is 1.8 and the maximum, 3.6. The average for the stores with sales from $40,000 to $80,-000 is the same as that for stores with sales of $80,000 to $180,000. When the stores are classified by location as in Table 70, the rates for those in both city-groups increase as the stores increase in size. For those in the small cities the average rate is 2.3. The minimum is 1.8 and the maximum, 3.5. For those located in the large cities, the average is 3.3; the minimum is 2.1 and the maximum, 3.7.

In 1919, as shown in Table 71, these 62 stores produced an average capital turnover rate of 3.4. The rate for those located in the small cities was 2.7, and for those located in the large

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TABLE 68

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES
CLASSIFIED BY SIZE, 1914

| Classified Total Net Sales (in 000's) | Stores Reporting on Average Stock | | | | Ratio Which Capital Turnover for Stores of Different Size, is of the Average Turnover | Per Cent. |
	Number	Total Net Sales	Average Stock	Capital Turnover	Per Cent. 0 20 40 60 80 100 120 140	
Total (Average)	63	$3,895,773	$1,672,843	2.3		100.0
Under $20	10	165,792.	104,404	1.6		69.6
$20 to $40	23	659,784	322,070	2.0		87.0
$40 to $60	7	349,096	150,104	2.3		100.0
$60 to $80	8	550,455	245,625	2.2		95.7
$80 to $100	5	451,206	189,148	2.4		104.3
$100 to $140	4	464,362	178,724	2.6		113.0
$140 to $180	2	318,371	124,149	2.6		113.0
$180 to $220	5	580,757	200,229	2.9		126.1
$220 to $300	•	•	•	•		•
$300 to $500	1	355,950	158,590	2.2		95.7
$500 & over	•	•	•	•		•
Under $40	33	825,576	426,474	1.9		82.6
$40 to $80	15	899,551	395,729	2.3		100.0
$80 to $180	11	1,233,939	492,021	2.5		108.7
$180 & over	4	936,707	358,619	2.6		113.0

Average 2.3

cities, 4.2. Generally speaking, the rates in 1919 increase as the stores increase in size, the differences in the rates for the stores of moderate size, however, being smaller than those for stores with smaller or larger sales.

In 1918 the average capital turnover rate for the 62 stores was 2.4. The minimum was 1.7 and the maximum, 3.0. The average rate for the stores in the small cities was 2.1, and for those in the large cities, 2.7. Generally speaking, the amounts increase as the stores increase in size, but to this rule the stores in the cities with population of 40,000 and over are exceptions.

In 1914 the average capital turnover rate for the 62 stores was 2.3. The minimum was 1.9 and the maximum, 2.6. For the group of stores located in the small cities the average was 2.0 and for those in the large cities, 2.6. With minor exceptions the rates increase as the stores increase in size, this tendency, however, being more

TABLE 69

NUMBER OF STORES WITH SPECIFIED RATES OF CAPITAL TURNOVER, CLASSIFIED
BY SIZE, 1919

Classified Total Net Sales (in 000's)	Average Capital Turnover	Number of Stores with Specified Rates of Capital Turnover										
		Total	Under 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 4.5	4.5 to 5.0	5.0 & over
Total	3.4	138	1	8	15	28	31	15	11	11	5	13
Under $20	-	-	-	-	-	-	-	-	-	-	-	-
$20 to $40	2.0	22	1	5	3	4	5	2	-	2	-	-
$40 to $60	2.5	32	-	1	4	13	5	3	3	1	1	1
$60 to $80	2.5	24	-	2	5	4	5	1	3	-	1	2
$80 to $100	3.2	11	-	-	2	-	2	2	2	1	-	2
$100 to $140	2.9	15	-	-	1	3	5	3	-	2	-	1
$140 to $180	2.6	10	-	-	-	3	5	1	1	-	-	-
$180 to $220	3.9	7	-	-	-	-	1	2	-	1	2	1
$220 to $300	3.4	4	-	-	-	1	-	-	1	1	1	-
$300 to $500	4.7	7	-	-	-	-	-	1	1	2	-	3
$500 & over	4.6	5	-	-	-	-	2	-	-	1	-	3
Under $40	2.0	22	1	5	3	4	5.	2	-	2	-	-
$40 to $80	2.5	56	-	3	9	17	11	4	6	1	2	3
$80 to $180	2.9	36	-	-	3	6	12	6	3	3	-	3
$180 & over	4.4	24	-	-	-	1	3	3	2	5	3	7

clearly reflected when the stores are classified solely by size than when classified both by size and location.

Summarizing the tables showing the rates of capital turnover in stores of different size, it may be concluded as follows: First, the rates increase as the stores increase in size, exceptions to this rule being evident only in relatively few instances and not frequent enough to disprove the general ten-dency. Second, when identical stores for the three years are classified both by size and location, the rates increase as the stores increase in size, the tendency, however, being more clearly established for stores in the small than for those in the large cities. This limitation for the large cities may undoubtedly be attributed in part to the relatively small number of stores for which data were available.

TABLE 70

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR 62 IDENTICAL
STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919,
1918, AND 1914, COMBINED

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				Ratio Which Capital Turnover for 62 Identical Stores of Different Size, is of the Average Turnover Per Cent.	Per Cent.
		Number of Store-years	Total Net Sales	Average Stock	Capital Turnover	0 20 40 60 80 100 120 140	
Total (Average)	Total (Average)	186	$18,970,968	$6,792,068	2.8		100.0
	Under $40	61	1,637,605	895,512	1.8		64.3
	$40 to $80	57	3,319,754	1,382,038	2.4		85.7
	$80 to $180	44	4,944,562	2,080,653	2.4		85.7
	$180 & over	24	8,869,047	2,433,865	3.6		128.6
Under 40	Total (Average)	138	8,103,835	3,464,865	2.3		82.1
	Under $40	58	1,583,944	870,512	1.8		64.3
	$40 to $80	50	2,841,433	1,206,132	2.4		85.7
	$80 to $180	27	3,059,695	1,210,420	2.5		89.3
	$180 & over	3	618,763	177,801	3.5		125.0
40 and over	Total (Average)	48	10,867,133	3,327,203	3.3		117.9
	Under $40	3	53,661	25,000	2.1		75.0
	$40 to $80	7	478,321	175,906	2.7		96.4
	$80 to $180	17	2,084,867	870,233	2.4		85.7
	$180 & over	21	8,250,284	2,256,064	3.7		132.1

Average 2.8

(2)—ANNUAL RATES OF CAPITAL TURN-
OVER FOR STORES CLASSIFIED BY
SIZE AND BY SIZE OF CITY IN
WHICH LOCATED,* 1919, 1918, AND
1914.

In Tables 69 to 73, inclusive, iden-
tical stores are classified by size and
location and the corresponding capital
turnover rates determined for each
group. An analysis of these tables
leads to the conclusion that the rates
increase as the stores increase in size;
that is, the size of the store is a deter-
mining influence on the rate at which

* Population figures are for 1920.

capital is turned. Has the size of the
city in which stores are located a simi-
lar influence? Light may be thrown
on this question by comparing the
capital turnover rates for stores of es-
sentially the same size but of different
location. For this purpose, the expe-
rience of the stores in the combined
years may best be used. Judged by
this experience alone, no definite an-
swer to this question can be given.
For some of the groups the rates are
higher in the small than in the large
cities, and for others the reverse con-
dition holds. Too much significance
cannot be attached to the differences,

TABLE 71

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR 62 STORES CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1919

| Size of City (in 000's) | Classified Total Net Sales (in 000's) | Stores Reporting on Average Stock | | | | Ratio Which Capital Turnover for 62 Stores of Different Size in Cities of Different Size, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 140 160 | Per Cent. |
		Number	Total Net Sales	Average Stock	Capital Turnover		
Total (Average)	Total (Average)	62	$9,120,198	$2,657,657	3.4		100.0
	Under $40	8	232,387	131,838	1.8		52.9
	$40 to $80	23	1,325,681	523,068	2.5		73.5
	$80 to $180	18	2,222,916	799,432	2.8		82.4
	$180 & over	15	5,339,214	1,203,519	4.4		129.4
Under 40	Total (Average)	46	3,739,420	1,386,667	2.7		79.4
	Under $40	7	210,410	114,838	1.8		52.9
	$40 to $80	23	1,325,681	523,068	2.5		73.5
	$80 to $180	13	1,584,566	570,960	2.8		82.4
	$180 & over	3	618,763	177,801	3.5		102.9
40 and over	Total (Average)	16	5,380,778	1,271,190	4.2		123.5
	Under $40	1	21,977	17,000	1.3		38.2
	$40 to $80	-	-	-	-		-
	$80 to $180	5	638,350	228,472	2.8		82.4
	$180 & over	10	4,720,451	1,025,718	4.6		135.3

Average 3.4

because the sales-groups are not of equal width, nor are the stores within them of equal size. In the individual years, too, the data upon this question are conflicting. An inspection of the tables will reveal the detail for each of the years.
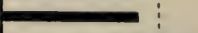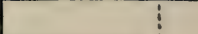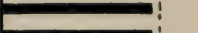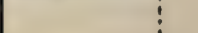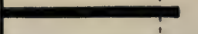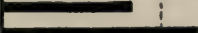
(3)—ANNUAL RATES OF CAPITAL TURNOVER FOR STORES CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914.

In Table 74, the stores for which data are available as a basis for computing capital turnover are classified by geographical divisions of the United States. The average for the country as a whole is 2.9. The minimum rate—2.3—applies to the East, and the maximum—3.2—to both the South and the East North Central. The average rates in the different divisions, except the East, are strikingly uniform in spite of the difference in the number and size of the stores represented. Whatever differences are shown are probably due to the size of the stores in the different districts, rather than to the factor of location. Yet the size of the stores alone does not seem to account fully

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TABLE 72

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR 62 STORES
CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1918

Size of City (in·000's)	Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				Ratio Which Capital Turnover for 62 Stores of Different Size in Cities of Different Size, is of the Average Turnover Per Cent.	Per Cent.
		Number	Total Net Sales	Average Stock	Capital Turnover	0 20 40 60 80 100 120 140	
Total (Average)	Total (Average)	62	$6,023,680	$2,489,078	2.4		100.0
	Under $40	20	579,642	336,700	1.7		70.8
	$40 to $80	20	1,163,205	491,251	2.4		100.0
	$80 to $180	15	1,687,707	789,200	2.1		87.5
	$180 & over	7	2,593,126	871,927	3.0		125.0
Under 40	Total (Average)	46	2,607,350	1,218,788	2.1		87.5
	Under $40	19	567,338	333,700	1.7		70.8
	$40 to $80	18	1,016,089	434,776	2.3		95.8
	$80 to $180	9	1,023,923	450,312	2.3		95.8
	$180 & over	-	-	-	-		-
40 and over	Total (Average)	16	3,416,330	1,270,290	2.7		112.5
	Under $40	1	12,304	3,000	4.1		170.8
	$40 to $80	2	147,116	56,475	2.6		108.3
	$80 to $180	6	663,784	338,888	2.0		83.3
	$180 & over	7	2,593,126	871,927	3.0		125.0

Average 2.4
Full length not shown

for the differences. The average amount of sales per store for the stores in the West is $184,317; for those in the East North Central, $87,931; and for those in the West North Central, $83,949. But these amounts are averages, and the details which make them up undoubtedly vary.

In Table 75 the stores are classified by geographical divisions for each of the years 1919, 1918, and 1914. From Tables 63 and 64, referring respectively to a varying and to an identical number of stores, it was shown that the average capital turnover rates were approximately the same for 1918 and 1914, but that for 1919 the rate was somewhat higher. Table 75 shows that this condition holds in each of the geographical divisions of the country. In the West and in the East North Central, the differences between 1918 and 1919 are relatively larger than in the other divisions. Table 75 is instructive in that it shows conclusively in the matter of capital turnover, that 1919 was not only an exceptional year for the country as a whole, but also for each of the geographical divisions.

TABLE 73

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR 62 STORES
CLASSIFIED BY SIZE AND BY SIZE OF CITY, 1914

| Size of City (in 000's) | Classified Total Net Sales (in 000's) | Stores Reporting on Average Stock | | | | Ratio Which Capital Turnover for 62 Stores of Different Size in Cities of Different Size, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 140 | Per Cent. |
		Number	Total Net Sales	Average Stock	Capital Turnover		
Total (Average)	Total (Average)	62	$3,827,090	$1,645,135	2.3		100.0
Total (Average)	Under $40	33	825,576	426,974	1.9		82.6
	$40 to $80	14	830,868	367,719	2.3		100.0
	$80 to $180	11	1,233,939	492,021	2.5		108.7
	$180 & over	4	936,707	358,419	2.6		113.0
Under 40	Total (Average)	46	1,757,065	859,410	2.0		87.0
	Under $40	32	806,196	421,974	1.9		82.6
	$40 to $80	9	499,663	246,298	2.0		87.0
	$80 to $180	5	451,206	189,148	2.4		104.3
	$180 & over	-	-	-	-		-
40 and over	Total (Average)	16	2,070,025	785,723	2.6		113.0
	Under $40	1	19,380	5,000	3.9		169.6
	$40 to $80	5	331,205	119,431	2.8		121.7
	$80 to $180	6	782,733	302,873	2.6		113.0
	$180 & over	4	936,707	358,419	2.6		113.0

* Full length not shown   Average 2.3

TABLE 74
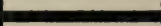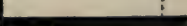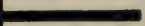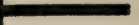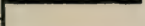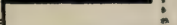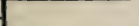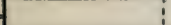
TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES
CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914, COMBINED

| Geographical Divisions | Stores Reporting on Average Stock | | | | Ratio Which Capital Turnover for Each Division, is of the Average Turnover Per Cent. 0 20 40 60 80 100 120 | Per Cent. |
	Number of Store-years	Total Net Sales	Average Stock	Capital Turnover		
Total (Average)	318	$34,557,594	$11,998,419	2.9		100.0
The East	42	3,793,823	1,618,844	2.3		79.3
The South	39	7,097,011	2,188,533	3.2		110.3
East North Central	90	7,913,803	2,467,093	3.2		110.3
West North Central	113	9,486,183	3,544,845	2.7		93.2
The West	34	6,266,774	2,179,104	2.9		100.0

Average 2.9

TABLE 75

TOTAL NET SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY GEOGRAPHICAL DIVISIONS, 1919, 1918, AND 1914

Geographical Divisions	Years	Stores Reporting on Average Stock				Ratio Which Capital Turnover for All Divisions and for Each Division, is for Each Year Based on the Average Turnover Per Cent.	Per Cent.
		Number of Store-years	Total Net Sales	Average Stock	Capital Turnover	0 20 40 60 80 100 120 140	
Total (Average)	Total (Average)	318	$34,557,594	$11,998,419	2.9		100.0
	1919	138	18,909,915	5,571,436	3.4		117.2
	1918	117	11,751,906	4,754,140	2.5		86.2
	1914	63	3,895,773	1,672,843	2.3		79.3
The East	Total (Average)	42	3,793,823	1,618,844	2.3		79.3
	1919	16	1,766,751	650,081	2.7		93.1
	1918	16	1,363,486	662,345	2.1		72.4
	1914	10	663,586	306,418	2.2		75.9
The South	Total (Average)	39	7,097,011	2,189,533	3.2		110.3
	1919	21	4,156,293	1,159,392	3.6		124.1
	1918	14	2,704,775	933,131	2.9		100.0
	1914	4	235,943	96,010	2.5		86.2
East North Central	Total (Average)	90	7,913,803	2,467,093	3.2		110.3
	1919	39	4,452,017	1,140,762	3.9		134.5
	1918	32	2,544,111	961,554	2.6		89.7
	1914	19	917,675	364,777	2.5		86.2
West North Central	Total (Average)	113	9,486,183	3,544,845	2.7		93.1
	1919	48	5,267,648	1,702,219	3.1		106.9
	1918	41	3,040,151	1,321,604	2.3		79.3
	1914	24	1,178,384	521,022	2.3		79.3
The West	Total (Average)	34	6,266,774	2,179,104	2.9		100.0
	1919	14	3,267,206	918,982	3.6		124.1
	1918	14	2,099,383	875,506	2.4		82.8
	1914	6	900,185	384,616	2.3		79.3

Average 2.9
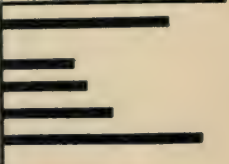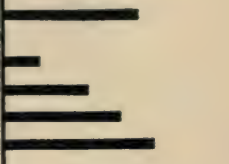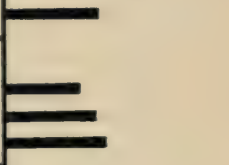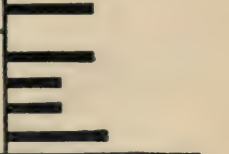
(4)—ANNUAL RATES OF CAPITAL TURNOVER FOR SPECIFIED DEPARTMENTS, 1919.

In Table 76, the annual rates of capital turnover are given separately for four major departments for stores classified by size. In the discussion of departmental stock turnover, it was shown that the rates increase as the stores increase in size. What was true

TABLE 76

SALES, AVERAGE STOCK, AND CAPITAL TURNOVER FOR SPECIFIED DEPARTMENTS FOR STORES CLASSIFIED BY SIZE, 1919

Departments	Classified Total Net Sales (in 000's)	Stores Reporting on Average Stock				
		Number	Departmental Sales	Departmental Average Stock	Capital Turnover	
					Actual	Graphic (0 1 2 3 4 5 6 7)
	Total (Average)	41	$5,512,568	$1,059,317	5.2	
Men's and Young Men's Clothing	Under $40	2	19,470	8,750	2.2	
	$40 to $80	9	226,532	85,725	2.6	
	$80 to $180	15	863,530	251,322	3.4	
	$180 & over	15	4,403,036	713,520	6.2	
	Total (Average)	28	568,212	135,510	4.2	
Men's Hats and Caps	Under $40	1	1,970	1,800	1.1	
	$40 to $80	5	25,281	9,567	2.6	
	$80 to $180	10	108,039	29,742	3.6	
	$180 & over	12	432,922	94,401	4.6	
	Total (Average)	20	1,167,049	397,508	2.9	
Men's Furnishings	Under $40	-	-	-	-	
	$40 to $80	4	55,056	24,074	2.3	
	$80 to $180	10	410,311	145,266	2.8	
	$180 & over	5	701,682	228,168	3.1	
	Total (Average)	17	410,513	151,480	2.7	
Boys' and Children's Clothing	Under $40	1	668	248	2.7	
	$40 to $80	5	15,689	8,998	1.7	
	$80 to $180	5	58,516	34,072	1.7	
	$180 & over	5	335,640	108,162	3.1	

of stock is also true of capital turnover. The average capital turnover rate in 1919 for departments handling men's and young men's clothing was 5.2. For stores with sales under $40,000 it was 2.2., and for those with sales of $180,000 and over it was 6.2. The average rate for departments handling men's hats and caps was 4.2. The rate for the one store with sales under $40,000 was 1.1 and for the 12 stores with sales of $180,000 and over, 4.6. The average rates for both men's furnishing, and boys' and children's clothing—respectively, 2.9 and 2.7— are noticeably lower than for men's and young men's clothing and men's hats and caps. In spite of the fact, however, that only a few stores are available for comparison by size for

each of these departments, the rates, with minor exceptions, increase as the stores increase in size.

C.—Summary.

(1). The average rates of capital turnover for a varying and for an identical number of stores for the three years 1919, 1918, and 1914, combined, are, respectively, 2.9 and 2.8. For both groups of stores the rates increased slightly between 1914 and 1918, and markedly between 1918 and 1919.

(2). Average rates of capital turnover increase as stores increase in size, the lowest rates characterizing small, and the highest rates, large stores. This condition holds for the separate and the combined years for both a varying and an identical number of stores.

(3). The average capital turnover rates are slightly higher for stores in large cities than for those of similar size in small cities.

(4). Capital turnover rates are higher for stores in the South and in the East North Central than in the other divisions and in the country as a whole.

(5). Capital turnover rates for the four departments discussed are highest in men's and young men's clothing depart-ments and lowest in boys' and children's clothing departments, the average rates being 5.2 and 2.7, respectively. Generally speaking, the average rates increase as the stores increase in size, but to this general rule those for boys' and children's departments seem to be exceptions.

3.—COMPARISON OF ANNUAL RATES OF STOCK AND CAPITAL TURNOVER IN IDENTICAL STORES, 1919.

Stock and capital turnover rates have been discussed separately in Section VI, 1 and 2, above. It is thought to be worth while in concluding this part of this volume to compare for 1919 the two rates for groups of identical stores. The details for such a comparison are found in Tables 77 to 80, inclusive.

In Table 77, 121 stores are classified by size and location, and for each group the annual stock and capital turnover rates are given. For the stores as a whole, the stock in this year was turned twice, while the capital was turned 3.4 times. That is, for every turn of stock, capital was turned 1.7 times. The range of stock turns was from 1.3 to 2.4, while the corresponding range of capital turns was from 1.9 to 4.2, the rates in both cases increasing as the stores increased in size.

When the stores are classified by location, the average rate of stock turn for the stores in the small cities

TABLE 77

ANNUAL STOCK AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY SIZE AND
BY SIZE OF CITY, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Number of Stores	Annual Stock Turnover		Annual Capital Turnover	
			Actual	Graphic 0 1 2 3 4 5	Actual	Graphic 0 1 2 3 4 5
Total (Average)	Total (Average)	121	2.0		3.4	
	Under $40	16	1.3		1.9	
	$40 to $80	47	1.7		2.5	
	$80 to $180	35	1.8		2.9	
	$180 & over	23	2.4		4.2	
Under 40	Total (Average)	86	1.7		2.6	
	Under $40	15	1.4		1.9	
	$40 to $80	44	1.7		2.5	
	$80 to $180	22	1.7		2.6	
	$180 & over	5	2.4		3.8	
40 and over	Total (Average)	35	2.3		4.0	
	Under $40	1	0.8		1.3	
	$40 to $80	3	2.5		2.5	
	$80 to $180	13	1.9		3.5	
	$180 & over	18	2.4		4.3	

Average 2.0   Average 3.4

was 1.7, and the corresponding rate of capital turn, 2.6. For the stores in the large cities, the average turns, respectively, were 2.3 and 4.0. For both groups of stores, as classified, the turns increase as the stores increase in size, the rate of increase being faster for capital than for stock.

When stores of the same size in cities of different size are compared, both rates are higher for stores in the large than for those in the small cities, although for some of the groups sufficient samples are not available for safe generalization.

Detailed rates for the stock and capital turns for 121 stores are shown in Table 77.

In Table 78, the stock and capital turnover rates are shown for 121 stores classified by their geographical location. From division to division of the country, the rates are obviously affected by the size and possibly by the city location of the stores. It is unnecessary, for this group of stores, to repeat what has been said above respecting geographical location as such. What is worth mentioning, however, is the fact that for every

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TABLE 78

ANNUAL STOCK AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY GEOGRAPHI-
CAL DIVISIONS, 1919

Geographical Divisions	Number of Stores	Annual Stock Turnover		Annual Capital Turnover	
		Actual	Graphic 0 1 2 3 4 5	Actual	Graphic 0 1 2 3 4 5
Total (Average)	121	2.0		3.4	
The East	16	1.6		2.7	
The South	17	2.2		3.7	
East North Central	31	2.3		3.6	
West North Central	43	2.1		3.1	
The West	14	1.9		3.6	

Average 2.0   Average 3.4

region the capital turns exceed the stock turns. For the respective regions, the ratios of capital to stock turns are as follows: The East, 1.7; the South, 1.7; the East North Central, 1.6; the West North Central, 1.5; the West, 1.9. For all districts combined, the relation is 1.7, and from this average the ratios in the various regions do not materially differ. Relatively, stock turns are lowest in the East and the West, while capital turns are lowest in the East and in the West North Central. Capital turns per stock turns are lowest in the East North Central and the West North Central.

It is of interest to compare the stock and capital turns of 53 stores, classified by the proportion which their sales of clothing constitute of their total net sales. This is done in Table 79.

The average rate of stock turn for these stores was 2.1—the same as for

the 314 stores shown in Tables 55 to 59. The corresponding average capital turn was 3.7, or 0.3 higher than for the 121 stores shown in Table 78. For the 53 stores, both stock and capital turns increase as the proportion of clothing to total sales increases, but the difference from store-group to store-group is greater for capital than for stock turn, until stores are encountered which have 60 per cent. and over of their total sales represented by sales of clothing. For this latter group, the per cents of increase over the stores having the lowest per cent. of their sales in clothing are approximately equal both for stock and for capital turns.

As the per cents which clothing sales constitute of total net sales increase, the number of capital turns per stock turn remains constant for stores having per cents between 30 and 60. For those having per cents of clothing sales to total sales of ''un-

TABLE 79

ANNUAL STOCK AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY AMOUNT OF
SALES OF MEN'S AND YOUNG MEN'S CLOTHING PER $100
OF TOTAL NET SALES, 1919

Amount of Sales of Men's Clothing per $100 of Total Net Sales	Number of Stores	Annual Stock Turnover		Annual Capital Turnover	
		Actual	Graphic	Actual	Graphic
Total (Average)	53	2.1		3.7	
Under $30	6	1.5		2.1	
$30 to $40	8	1.5		2.8	
$40 to $50	21	2.0		3.6	
$50 to $60	12	2.2		4.1	
$60 & over	6	2.9		4.4	

Average 2.1   Average 3.7

der 30'' and ''60 and over'' the number of capital turns per stock turns, while approximately the same, is less than the average for all stores.

The relations of yearly stock and capital turns for 36 stores, classified by the per cent. of sales of furnishings to total net sales, are shown in Table 80. The number of yearly turns of stock and of capital, respectively, for these stores was 2.2 and 4.0. That is, capital was turned 1.8 times for every turn of stock. As the proportions, which sales of furnishings constitute of total net sales, increase, the number of capital turns per stock turns decreases except for the last group, containing but 2 stores and having 50 to 60 per cent. of their total net sales represented by sales of furnishings. The data for this comparison, however, are so meagre that it is unsafe to generalize. The facts are inserted for what they may be worth to merchants and are not held to be adequate to describe a general principle.

A.—*Summary.*

(1). For 121 identical stores in 1919 capital was turned 1.7 times for every turn of stock.

(2). Both capital and stock turns increase as stores increase in size, the rate of increase for capital being faster than for stock turns.

(3). The average number of capital turns for a given group of stores is greater than the average number of stock turns

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TABLE 80

ANNUAL STOCK AND CAPITAL TURNOVER FOR STORES CLASSIFIED BY AMOUNT OF
SALES OF MEN'S FURNISHINGS PER $100 OF TOTAL NET SALES, 1919

Amount of Sales of Men's Furnishings per $100 of Total Net Sales	Number of Stores	Annual Stock Turnover		Annual Capital Turnover	
		Actual	Graphic	Actual	Graphic
Total (Average)	36	2.2		4.0	
Under $30	21	2.3		4.4	
$30 to $40	8	1.7		3.1	
$40 to $50	5	1.9		3.3	
$50 to $60	2	1.9		4.3	

Average 2.2   Average 4.0

in each geographical division of the United States.

(4). The larger the proportion which sales of clothing constitute of total net sales, the more rapid the turn of both capital and stock.

(5). The average rates of capital and stock turns are not appreciably affected by changing proportions of sales of furnishings per $100 of total net sales.

PARTLY as a by-product of the audit to which the questionnaires were subjected to secure expense ratios and rates of stock turnover, and partly as a result of independent study, certain data were secured which reflect operating conditions in clothing stores in 1919. There was nothing in the questionnaire as submitted which called for a statement of profits, nor were profits as such reported by the different merchants. Both gross and net profits per $100 of total net sales, however, were determined for stores of different size and are published herein on an index number or relative basis. By the use of index numbers and without divulging actual profits, it is possible to show the relative positions of stores of different size in this respect.

Throughout the study of the clothing industry, the Bureau has taken every precaution not to betray the confidence which has been imposed in it. In view of the fact that merchants did not report their profits as such and that the only year for which they could be determined was 1919, it has seemed inadvisable to publish the actual amounts of profits per $100 of total net sales.

In Table 81 index or relative numbers for certain phases of operation are shown for stores classified by size.

TABLE 81

INDEX NUMBERS OF RATIOS OF OPERATION PER $100 OF TOTAL NET SALES FOR
STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Number of Stores	Cost of Merchandise Sold		Gross Trading Profit		Total Expense	
		Index Number	Graphic Per Cent.	Index Number	Graphic Per Cent.	Index Number	Graphic Per Cent.
Total (Average)	265	100.0		100.0		100.0	
Under $40	34	103.1		93.9		81.3	
$40 to $80	104	102.7		94.7		86.4	
$80 to $180	88	101.4		97.3		95.1	
$180 & over	39	97.7		104.5		111.0	

Classified Total Net Sales (in 000's)	Number of Stores	Net Trading Profit		Net Miscellaneous Income		Net Profit	
		Index Number	Graphic Per Cent.	Index Number	Graphic Per Cent.	Index Number	Graphic Per Cent.
Total (Average)	265	100.0		100.0		100.0	
Under $40	34	114.0		65.7		107.4	
$40 to $80	104	111.2		80.4		107.0	
$80 to $180	88	102.3		82.4		98.6	
$180 & over	39	93.9		122.5		97.8	

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TABLE 82

INDEX NUMBERS OF ANNUAL STOCK TURNOVER, NET PROFIT PER $100 OF TOTAL
NET SALES, AND NET PROFIT PER $100 OF TOTAL NET SALES PER STOCK
TURNOVER FOR STORES CLASSIFIED BY SIZE, 1919

Classified Total Net Sales (in 000's)	Number of Stores	Annual Stock Turnover			Net Profit		Net Profit per $100 of Total Net Sales per Stock Turnover	
		Actual	Index Number	Graphic Per Cent. 0 20 40 60 80 100 120	Index Number	Graphic Per Cent. 0 20 40 60 80 100 120	Index Number	Graphic Per Cent. 0 20 40 60 80 100 120 140 160
Total (Average)	265	2.2	100.0		100.0		100.0	
Under $40	34	1.4	63.6		107.4		168.7	
$40 to $80	104	1.8	81.8		107.0		130.7	
$80 to $180	88	1.9	86.4		98.4		113.9	
$180 & over	39	2.8	127.3		97.8		76.8	

The average condition for the 265 stores, the records of which are available for this purpose, is used as a basis for comparison. The index numbers refer to cost of merchandise sold, gross trading profits, total expenses, net trading profit, miscellaneous income less miscellaneous charges, and net profits. An explanation of each of these terms is necessary to a proper understanding of the relative figures.

Cost of merchandise sold is secured by adding to the 1918 inventories at cost, the purchases at cost made during 1919, less freight and cartage charges paid, and by subtracting the inventories at cost at the end of 1919. Gross trading profit is secured by subtracting the cost of merchandise sold from total net sales. Total expense includes all operating expenses such as rent, wages and salaries, advertising, bushelling, and general expense. It does not include interest on borrowed money, freight and cartage, nor federal taxes. Net trading profit is secured by subtracting total ex-

pense from gross trading profit. Net miscellaneous income is secured by subtracting such charges as interest on borrowed money, etc., from miscellaneous income, such as income from tailoring and alterations, etc. Net profit is secured by adding net miscellaneous income to net trading profit. The index numbers express the operating factors as ratios—that is, in terms of $100 of total net sales.

The process of arriving at net profit is shown by the following equations:

Net Sales — Cost of Merchandise Sold = Gross Trading Profit

Gross Trading Profit — Total Expense = Net Trading Profit

Net Trading Profit ± Miscellaneous Income or Charges = Net Profit

Table 81 shows that cost of merchandise sold per $100 of total net sales decreases as stores increase in size and that gross trading profit per $100 of total net sales increases as stores increase in size. Total expense per $100 of total net sales increases with stores of increasing size, the net

effect being that net trading profit per $100 of total net sales decreases as stores increase in size. Although net miscellaneous income per $100 of total net sales is larger for the large than for the small stores, it does not compensate for the decrease of net trading profit in terms of sales which occurs as stores increase in size. The effect of this on net profit is that the amounts per $100 of total net sales decrease as the stores increase in size.

Table 82 shows on a relative basis the amounts of net profit per $100 of total net sales, the number of annual stock turns, and the amount of net profit per $100 of total net sales per stock turn for the 265 stores classified by size. Net profit per $100 of total net sales decreases and annual stock turns increase as stores increase in size. On the contrary, the amounts of net profit per $100 of total net sales per stock turn decrease as stores increase in size. The relative positions of the different stores by groups are graphically shown by the lengths of the bars in Table 82.
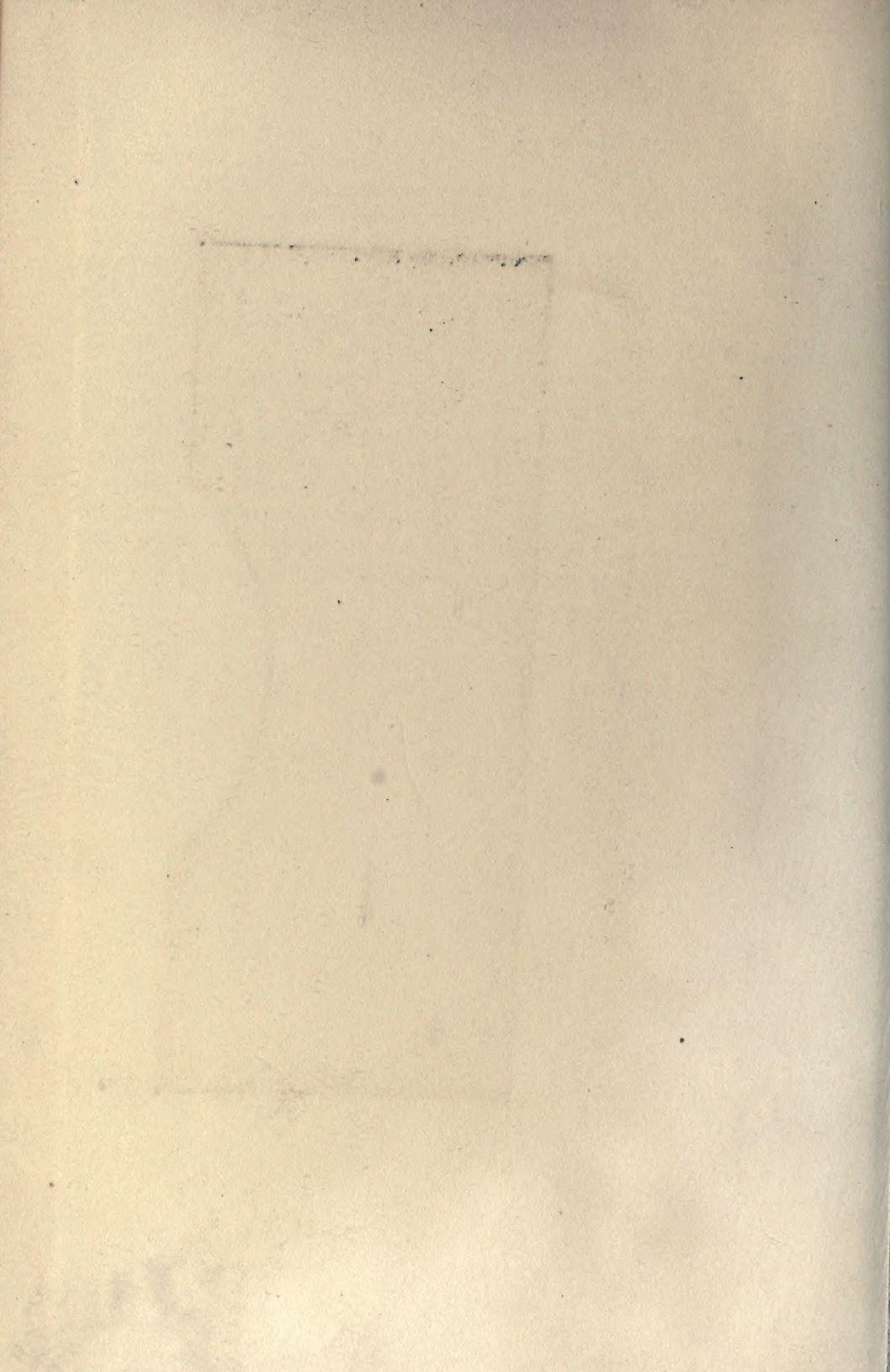
IT is necessary, in a concluding paragraph to this volume, only to call attention to the fact that in each stage of its preparation—in the selection, editing, and analysis of the data—care has been taken to reduce to a minimum elements of error due either to computation or to interpretation.

In undertaking the study of the retail distribution of clothing, the Bureau was conscious of the fact that statistical data are always susceptible of misuse, that they may appear to be exact when they are full of error, that many people are credulous to a fault in the use of statistical data and that it is necessary, in order to secure results in which dependence can be placed, not only to analyze thoroughly the crude, basic data, but also to present them in such form that those who are disposed to use them scientifically will have the necessary detail and the benefits of the interpretative comments concerning them.

The Bureau has conducted its study impartially and in keeping with the demands of scientific methods, and it is hoped that the same attitude of mind will characterize those who have occasion to interpret or use the information supplied.